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Maintaining Mental Health in Later Life: The Effectiveness of
Low-intensity Psychological Interventions and Factors associated
with Mental Health Literacy in Rural-dwelling Older Adults

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Doctorate in Clinical Psychology

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May 2019

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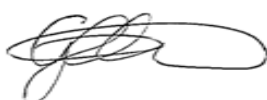
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Chapter One: Thesis Abstract

Background: Older adults are less likely to access mental health services than younger adults despite experiencing similar rates of mental health problems. Older adults experiencing mental health problems are more likely to be offered medication than psychological interventions compared with younger adults. There is a recognized need to increase access to early, psychological intervention and preventative mental healthcare for older adults globally. Improving access to mental health services in rural areas is a national priority. The combined risks of an ageing population, inadequate service preparedness and comparatively poor mental health service utilisation by older adults, increases the likelihood of a large-scale mental health crisis. Mental health literacy (MHL) is associated with the recognition of mental health needs, service utilisation and improved mental health outcomes. Psychoeducation is often an integral part of low-intensity psychological intervention and receiving it is arguably linked to mental health literacy. Older adults have been found to have lower MHL and are more likely to use avoidance based coping strategies than younger adults. Little is known about the factors within older adults that perpetuate, ameliorate or confound these associations, particularly in a rural context.

Objectives: A systematic review '*The Effectiveness of Low-intensity Psychological Interventions on the Well-being of Older Adults*' synthesised the evidence for effectiveness and acceptability of low-intensity psychological interventions (self-help, psychoeducation, bibliotherapy, internet cognitive-behavioural therapy: iCBT) for older adults with mild-to-moderate mental health problems.

A cross-sectional questionnaire-based survey '*An Exploration into the Relationships between Mental Health Literacy, Experiential Avoidance and Mental Health in Older Adults in a Rural Scottish Region*' was used to explore the level of MHL, and the relationships between MHL, mental health, experiential avoidance, willingness to use mental health services and demographic variables in community-dwelling older adults in a rural Scottish region.

Methods: The systematic review protocol was registered on Prospero prior to data extraction. Ovid, EBSCOhost and ProQuest were searched for articles describing low-intensity psychological interventions. Pre and post outcome measures and a mean age of at least 50 (age range ≥ 40) were required for inclusion.

One hundred and fifty two respondents (aged ≥ 65 , $M = 71.9$) took part in the questionnaire study. The MHL Scale, Acceptance in Action Questionnaire-II

(experiential avoidance) and Clinical Outcomes in Routine Evaluation-10 (mental health status) measured the variables of interest.

Results: The 26 articles describing 23 studies included in the systematic review described (guided) iCBT, bibliotherapy, self-help, psychoeducation and audio interventions. The majority of studies were of good quality and reported improvements in participant's mental health scores post intervention. Participants were more likely to be female, aged 60-70 and to have obtained further education. Eight studies reported obtaining participant satisfaction ratings. Three studies reported collecting data from both rural and urban areas.

The empirical study found that respondents had good MHL. Half of the respondents reported being aware of local mental health services for older adults. Older age ($r(146) = -.32, p < .001$) and lower educational attainment ($F(1,145) = 5.34, p = .020$) were associated with poorer MHL in our sample. MHL was not significantly correlated with mental health problem severity or experiential avoidance. Self-reported willingness to use mental health services was associated with lower experiential avoidance ($\rho(146) = -.266, p = .001$), better mental health ($\rho(146) = -.193, p = .018$) and better MHL ($\rho(146) = .467, p \leq .001$). However, the single-item measure of willingness to use mental health services was unreliable due to its significant negative skew and narrow range of data points. Those who had used mental health services had higher MHL, higher experiential avoidance and poorer mental health than those who had not.

Conclusions: The findings from the systematic review provide tentative evidence to support the use of guided, low-intensity psychological interventions for mild-to-moderate mental health problems in older adults. Guided iCBT and bibliotherapy may be beneficial for older adults in their 60s and 70s experiencing mild-to-moderate levels of depression. iCBT may also be beneficial for reducing symptoms of mild-to-moderate anxiety. Providing the option of low-intensity psychological intervention, particularly iCBT, may help to increase participant engagement with treatment. Given difficulties in mental health service accessibility (both face-to-face and online) for those living in rural areas, future research should strive to specify whether participants are from rural or urban areas and explore any differences in outcomes. Improving rural-dwelling, older adults' MHL and their awareness of locally available services and supports may help to increase their willingness to seek mental health support.

Chapter Two: Layperson Summary

Older adults around the world are less likely to be referred to mental health services than younger people when they have mental health problems. Government initiatives around the world want to find ways to improve the quality of mental health services and to make such services more accessible to older adults. The term 'mental health literacy' is used to describe a person's knowledge about mental health. Mental health literacy is not very well researched in older adults or in people who live in rural areas. Some research suggests that older adults (people over 65 years old) have lower mental health literacy than younger people. This is important because research also shows that people who have better mental health literacy are more likely to seek and receive appropriate support for mental health problems.

This thesis is formed of two parts. The first part is a review of research studies describing low-level mental health support for older adults; such as self-help, internet cognitive-behavioural therapy, psychoeducation (education about mental health) and bibliotherapy (information about mental health). This was carried out in order to find out whether older adults who have mild-to-moderate mental health problems benefitted from such low-level mental health support. This was established based on changes in mental health scores and participant's self-reported satisfaction levels. The second part is an original research study. This study aimed to find out the level of mental health literacy of older adults in a rural Scottish health board and to find out what local mental health services and supports people were aware of. It also aimed to explore whether mental health literacy is related to people's well-being, their coping styles and their willingness to use mental health services. We hope that mental health services and community organisations for older adults can learn from this research and that it offers some new ideas about how to engage and support older adults.

Part 1: The review summarises the findings of 26 articles describing 23 studies. All of the studies reported mental health scores before and after low-level mental health support was received and included older adults (average age 67.9 years). The majority of studies were of good quality and indicated that these mental health supports improved older adults' mental health. However, participants were more likely to be women, aged between 60 and 70 and to have obtained further education. This means that it is not clear whether men, people over 70 or people

who do not have further education will benefit from these types of mental health support.

Only eight studies asked the participants what they thought of the support they had received. The findings from this review suggest that low-level mental health supports, which are facilitated by a mental health professional, can be beneficial for treating mild-to-moderate mental health problems in older adults. Facilitated iCBT and bibliotherapy may be beneficial for older adults in their 60s and 70s experiencing mild-moderate levels of depression. iCBT may also be beneficial for reducing symptoms of anxiety. Providing the option of low-level mental health support, particularly iCBT, may help older adults to successfully complete mental health treatment.

Part 2: The original research study recruited 151 older adults (aged 65 years and older) from the Scottish Borders. Participants completed a questionnaire. Questionnaires asked participants about their mental health knowledge, their well-being, their coping styles and other characteristics about themselves (such as their age, gender, income, mental health service use). Two thirds of participants had gone to college or university and the majority of participants were women (61.5%). The older adults in this study had higher mental health literacy compared to older adults in an Australian study from 3 years ago. It is possible that older adults who were more knowledgeable about mental health were more likely to take part than those without such knowledge.

Half of the participants were aware of at least one mental health service or support for older adults locally. Most participants (94.6%) indicated that they would seek help from a GP if they were concerned about their mental health. Our findings suggest that some older adults who might benefit from mental health services have not accessed them and that some older adults who experience mental health difficulties do not self-identify as having a mental health problem.

Younger participants and participants who had completed higher education were more likely to have better mental health knowledge. There was no significant relationship between mental health knowledge and mental health problem severity or coping style. Participants who had better mental health knowledge, better mental health and less avoidant, coping styles (i.e., who were less likely to push upsetting thoughts or emotions out of their mind) were more likely to report that they would be

willing to seek help from mental health services (and vice versa). However, the measure used to capture people's level of willingness to use mental health services was not very reliable and the findings may not be accurate. Finally, those who had used mental health services in the past had higher mental health knowledge, more avoidant coping styles and poorer mental health than those who had not. However, our results should be interpreted with caution because the statistical methods used to analyse the results cannot tell us whether or not any one characteristic (e.g., mental health knowledge) leads to another (e.g., willingness to seek mental health service support) but only that there is a connection between the two.

Interventions which improve rural-dwelling, older adults' mental health knowledge and their awareness of locally available mental health services and supports may help to increase their willingness to seek mental health support and empower them to make more informed decisions about their mental health and treatment options. Given that older adults in our sample said they were most likely to visit their GP when they have concerns about their mental health, primary care settings such as health centres may be the most optimal location for providing mental health information to older adults. This could be done through specialist education for GPs and/or information leaflets for older adults.

Chapter Three: The Effectiveness of Low-intensity Psychological Interventions on the Well-being of Older Adults: A Systematic Review

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Objectives: There is a recognized need to increase access to early intervention and preventative mental healthcare for older adults globally. Our objective was to synthesize the evidence for the efficacy and acceptability of low-intensity psychological interventions (self-help, psychoeducation, bibliotherapy, internet cognitive-behavioural therapy: iCBT) for older adults with mild-to-moderate mental health problems. **Methods:** A protocol was registered on Prospero prior to data extraction. Ovid, EBSCOhost and ProQuest were searched for articles describing low-intensity psychological interventions. Pre and post outcome measures and a mean age of at least 50 (age range ≥ 40) were required for inclusion. **Results:** The 26 articles describing 23 studies included in this review described (guided) iCBT, bibliotherapy, self-help, psychoeducation and audio interventions. The majority of studies were of good quality and reported improvements in participant's mental health scores post intervention. Participants were more likely to be female, aged 60-70 and to have obtained further education. Eight studies reported obtaining participant satisfaction ratings. Three studies included participants from rural areas. **Clinical Implications:** Guided iCBT and bibliotherapy may be beneficial for older adults in their 60s and 70s experiencing mild-to-moderate levels of depression. iCBT may also be beneficial for reducing symptoms of mild-to-moderate anxiety. Providing the option of low-intensity psychological intervention, particularly iCBT, may help to increase participant engagement with treatment. Future research should strive to seek and report on participant feedback. Future research should also specify whether participants are from rural or urban areas and explore any difference in outcomes.

Keywords: Older Adult, Mental Health, Psychological Intervention, Psychoeducation, Self-Help

Note: This article is tailored to meet the requirements for publication in the Clinical Gerontologist. See Appendix A for an overview of the style and reference guides and instructions for authors. Word count: 5723 (max 6,000)

Introduction

In the context of a rapidly ageing population, health services are predicted to continue to fall short of meeting the needs of older adults worldwide (World Health Organisation: WHO, 2018a). Despite older adults experiencing similar rates of mental health problems to the general population (WHO, 2017) they are more likely to experience mental healthcare inequalities. Older adults' mental health problems often go unidentified (Lee, 2007), they are less likely to access mental health services (Chaplin, Farquharson, Clapp & Crawford, 2015; Palinkas et al., 2007; Pettigrew, Donovan, Pescud, Boldy & Newton, 2010) or receive the same quality of mental healthcare compared to younger people (Lievesley, 2009). For example, older adults who have a mental health problem are more likely than younger adults to be prescribed pharmacological treatments than psychosocial interventions (American Psychological Association, 2017; Stickland & Gentry, 2016) notwithstanding self-reported fears of being given medication (Wuthrich, Frei, Pachana, & Oude Voshaar, 2015), increased risks of polypharmacy (Cahir et al., 2010), and findings from research trials which indicate that older adults often opt for psychosocial interventions rather than medication when given the choice (Cole, McCusker, Sewitch, Ciampi & Dyachenko, 2008). Once referred, older adults tend to have better engagement with, and outcomes following, psychological intervention than adults (Chaplin et al., 2015).

Several identified risk factors for mental health problems include bereavement, physical health difficulties and social isolation, all of which are especially pertinent to older adults (The Australian Government, 2006; WHO, 2017). Mental healthcare inequalities may stem from a range of issues including: practical barriers (such as transport and financial difficulties; Pepin, Segel & Coolidge, 2009), care provider difficulties in identifying mental health problems in older adults (Palinkas et al., 2007), stigma (Pettigrew et al., 2010) and poorer mental health literacy among older adults (Bonabi et al., 2016). A lack of timely and appropriate mental health intervention can exacerbate mental health problems (Mind, 2013). Over the past decade, government policies have highlighted mental healthcare for older adults as an area of priority (Mental Health Commission of Canada, 2012; The Scottish Government, 2016, Royal Australian and New Zealand College of Psychiatrists, 2011), particularly in rural areas because accessibility can be especially problematic (National Healthcare Disparities Report, 2010; The Scottish Government, 2016).

There is an identified need for timely, cost-effective mental health interventions for older adults including early intervention and preventative care (Lee, 2007; WHO, 2017).

Cohort effects including stoicism and differences in the language used to describe mental health between older adults and clinicians may deter older adults from seeking face-to-face support (Bryant, 2010). Therefore, self-help interventions may be of particular benefit to older adults due to their availability (e.g., no waiting times), accessibility (e.g., being available in client's own homes; Hobbs, Joubert, Mahoney & Andrews, 2018) and due to the relative privacy and autonomy such interventions afford. Low-intensity psychological interventions (e.g., self-help/psychoeducation) may help to increase access to timely mental health support for those with mild-to-moderate mental health problems (Mental Health Foundation, 2016; National Institute for Clinical Excellence, 2011; The Scottish Government, 2016). Psychoeducation involves "*providing patients with information about treatment, symptoms and resources and training them to use strategies for coping with symptoms*" (Tanaka, Ishikawa, Mochida, Kawano, Kobayashi, 2015 pp.196). Low-intensity psychological interventions are generally delivered remotely, utilize a resource (e.g., books, CDs, the internet) for the purposes of providing mental health information, and involve minimal contact with healthcare professionals (British Psychological Society, 2011).

More recently, such 'self help' interventions have been made available online (e.g., internet cognitive-behavioural therapy (iCBT); The Scottish Government, 2018). While reviews of the literature indicate that iCBT is highly efficacious for adult populations little is known about the evidence base for older adults (Andrews, Cuijpers, Craske, McEvoy & Titov, 2010). Crabb et al. (2012) completed a systematic review on iCBT for depression in older adults and found that on average only 3% of included participants were aged over 65 years. Promisingly, survey findings suggest that the number of older adults accessing the internet is increasing (Office of National Statistics, 2017) and that 45% of older adults from one UK health board indicated a willingness to use iCBT (Elsegood & Powell, 2008).

Proponents of mental health self-management propose that the transfer of control back to individuals promotes empowerment and enables "*people to rebuild their lives*" (Crepaz-Keay, 2010, p. 5). The idea that humans need to have a sense of

self-mastery among other factors, in order to thrive is emphasised in psychological theory (e.g., Bandura, 1988; Deci & Ryan, 2015). For example, self-determination theory posits that well-being and health are dependent on one's basic needs for competence, autonomy and relatedness being met (Deci & Ryan, 2015). Indeed, environments supportive of these needs are more likely to illicit intrinsic motivation which in turn is associated with more positive experiences and increased well-being (Deci & Ryan, 2015).

In a mental healthcare setting, offering choice (e.g., National Health Service, 2018) and providing psychoeducation may help to facilitate client's autonomy and sense of competence thereby increasing motivation and well-being. However, while psychoeducational 'self-help' interventions such as iCBT and bibliotherapy may help to promote autonomy and even competence, they may also perpetuate social isolation due to the distal nature of these interventions and limited contact with healthcare professionals. Furthermore, the increased likelihood of cognitive difficulties in older adults (Mental Health Foundation, 2016), and increased risk of depression in those who have a dementia (Singh-Manoux, 2017) raises concerns about the accessibility and appropriateness of distal interventions; the risks and benefits of which may be more difficult to monitor and may lead to more harm than benefit.

Few reviews of the literature have explored the efficacy of low-intensity psychological interventions for improving the mental health of older adults. Donker, Griffiths, Cuijpers and Christensen (2009) completed a meta-analysis of four studies utilising brief psychoeducation with adults and concluded that these interventions can reduce symptoms of psychological distress. Furthermore, comprehensive reviews of mental health interventions including bibliotherapy for depressed older adults (Holvast, Massoudi, Oude Voshaar & Verhaak, 2017; Pinguart, Duberstein & Lyness, 2007; Scogin, Welsh, Hanson, Stump & Coates, 2005) concluded that bibliotherapy was effective at reducing symptoms of depression in older adults. However, these conclusions stem from review of the same small pool of 4 – 6 intervention studies, hence, the consistently reported outcomes in favour of this approach.

The aforementioned reviews did not explore or synthesise participant satisfaction as part of determining intervention effectiveness. This is recommended in intervention

studies (Kaltenthaler, Parry, Beverley & Ferriter, 2008) and considered good practice for informing the evidence base (The Health Foundation, 2013). Furthermore, these reviews did not explore additional low-intensity psychological interventions for older adults (e.g., group discussion, audio interventions, iCBT) across mental health problems. Indeed, to our knowledge no systematic review on the evidence base for iCBT, in older adults exclusively, exist to date.

Aims

The aim of this review is to investigate the effectiveness of a broad range of low-intensity, psychological interventions on the mental health of older adults through systematic evaluation of the extant literature and to suggest clinical implications for the findings. The review questions are: (1) What are the effects of low-intensity psychological interventions on mental health outcomes (i.e., levels of depression, anxiety and/or psychological distress) in older adults? (2) Are low-intensity psychological interventions acceptable to older adults? (3) Whom are low-intensity psychological interventions evidenced to benefit?

Methods

The review protocol was registered on Prospero prior to formal screening and data extraction (registration number CRD42018086707).

Eligibility Criteria

Broad inclusion and exclusion criteria were employed in order to increase the sample size and examine a wide range of studies for qualitative synthesis. Inclusion criteria stipulated that participants had to be older adults (with a minimum cut-off of ≥ 40 years of age and a mean age of at least 50) with mild-to-moderate mental health problems as measured by tools validated for use with adults in general. Included intervention studies had to consist of low-intensity (e.g., self-help, psychoeducation) psychological interventions for mental health difficulties rather than interventions for physical or cognitive difficulties. Finally, studies considered for inclusion had to report pre and post mental health outcome measures. Studies involving psychoeducational interventions which were embedded within a more intensive therapeutic intervention (e.g., individualised or group CBT) or which utilised support groups were excluded.

Search Strategy

The following search terms: 1 (depress* OR anxi* OR “psychological distress” OR mood OR affective) AND 2 (psychoeducation OR “mental health literacy” OR “anxiety literacy” OR “depression literacy” OR “mental health first aid” OR bibliotherapy OR “mental health education” OR “self help”) AND 3 (elder* OR “old aged” OR geriatric* OR senior* OR “older adult*”) were run through Ovid (PsycINFO, Embase classic + Embase, MEDLINE-Epub ahead of print, In process, other non-indexed citations, 1946-present), EBSCOhost (CINAHL, ERIC) and ProQuest (ASSIA, Dissertations and Theses Global) until the 20th of July 2018. The terms were searched in the abstract or ‘anywhere but full text’ where possible. A second search using the terms (Internet* OR web* OR app) in the title was run with ‘AND 1 AND 3’ above on October 3rd 2018.

Selection

Titles and abstracts from all of the returned results were read and screened for inclusion by the first author. If eligibility could not be determined based on information in the abstract, the full article was read. The full texts ($n = 101$) of articles requiring further eligibility assessment were scrutinized in depth. Following this, all preliminarily accepted articles ($n = 31$) were read and discussed with two independent authors (ET & LH). Reference lists of included studies were screened for any additional studies ($n = 8$). Grey literature was sought but not found. Searches on Google and requests for any unpublished findings from authors of relevant studies ($n = 2$) yielded no results. Finally, the third author (LH) screened a random sample of included articles ($n = 6$) and additionally those articles for which eligibility could not be established ($n = 3$), comprising one third of the total sample. Inter-rater agreement on whether to include articles in the review was found on 8/9 articles. The remaining article was re-analysed, reviewed and excluded from this review. An overview of the selection process and reasons for exclusion are provided in Figure 1.

Data Extraction

Data was extracted according to the review aims. Therefore, the change in standardised mental health scores from pre to post intervention were sought and reported. If effect sizes (Cohen’s d) were absent, these were calculated when

possible. Furthermore, information about the publication year, study setting, population characteristics, details about the intervention and control conditions, sample sizes, outcome measures, and information regarding assessment of the risk of bias were extracted. In order to make meaningful comparisons across studies, more in-depth details about the type, nature and duration of the interventions were compiled. Finally, information about retention, compliance and participant satisfaction with the intervention were also compiled.

Quality Appraisal

In line with PRISMA guidelines, the methodological quality of all included studies was assessed using the Methodological Index for Non-Randomized Studies (MINORS) rating scale (Slim et al., 2003) and one item pertaining to ethical considerations taken from the Critical Appraisal Skills Programme checklist (CASP, 2018). The MINORS tool has good validity and reliability (Slim et al., 2003) and has been used as a risk of bias assessment (De Vos-Kerkhof, Geurts, Wiggers, Moll, & Oostenbrink, 2015). Items on the MINORS tool were scored '0' for *not reported or not applicable*, '1' for *reported but inadequate* and '2' for *reported and adequate*. In instances where items were not explicitly reported further details from the authors was sought ($n = 2$) and ratings were assigned based on extrapolated information. See Appendix B for the quality appraisal tool.

A random sample of the included studies ($n = 9$; 33%) were assessed by two independent authors (ET & LH) for inter-rater reliability and led to an inter-rater agreement of 85.6%. Further consensus (96%) was achieved through discussion with the third author (LH) and the final 4% discrepancy was resolved following discussion with the second author (ET).

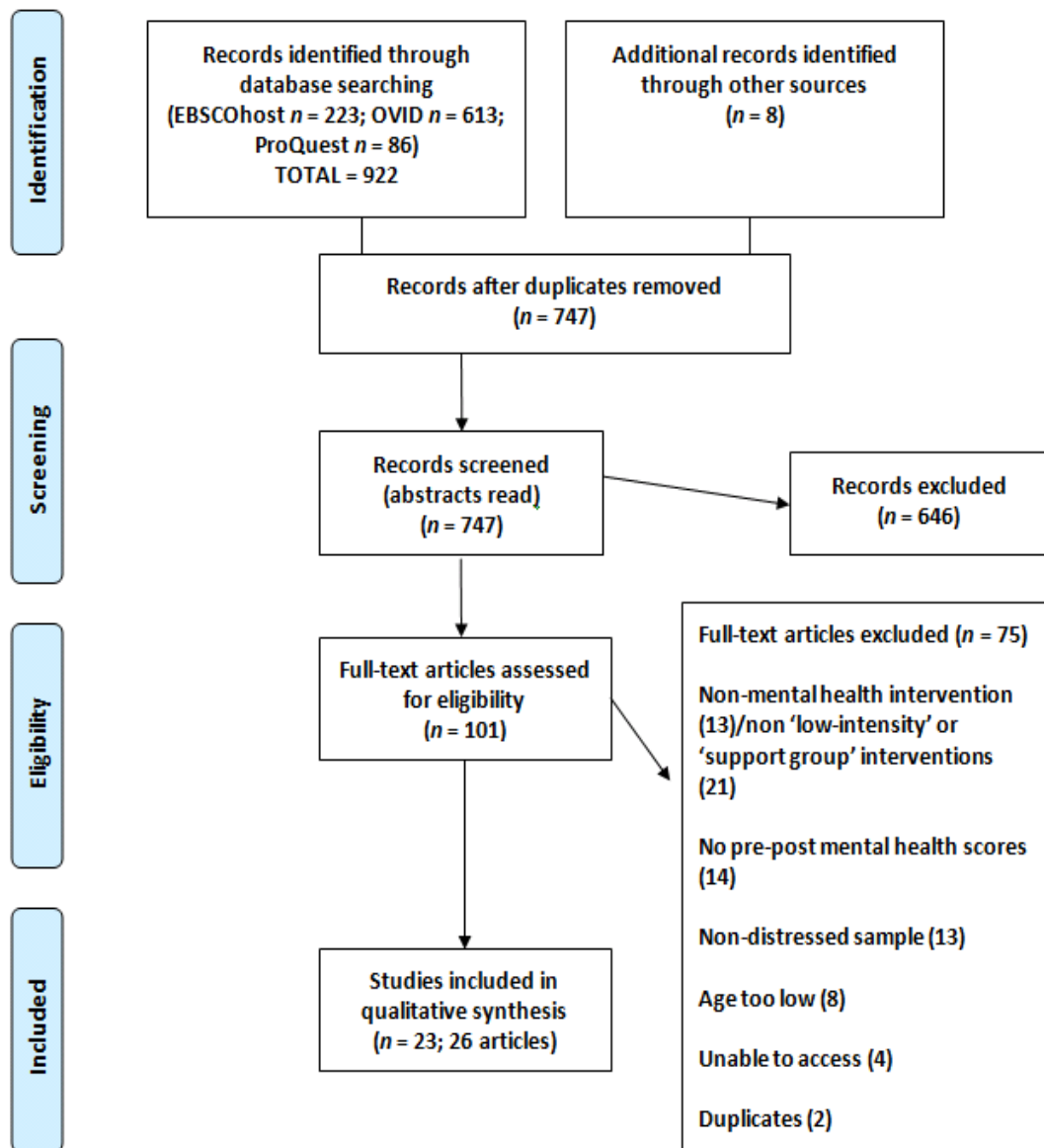


Figure 1. Prisma Flowchart (Moher, Liberat, Tetzlaff, Altman, The PRISMA Group, 2009).

Results

Study Selection

As shown in Figure 1 the electronic search ($n = 922$) and any additional articles found through the screening of reference lists ($n = 8$) yielded a combined total of 930 articles. This was reduced to 747 articles after duplicates were removed. A total of 646 articles were excluded based on information in the abstract, leaving 101

articles for full review. After full review, 75 articles were excluded and the remaining 26 articles, describing 23 studies, were included for qualitative synthesis. The main reasons for exclusion pertained to the nature of the intervention described (e.g., non mental-health intervention or non low-intensity interventions such as group CBT).

Included Studies

Details of the study characteristics are summarised in Table 1. The publication dates among the 23 studies selected for review ranged from 1987 to 2018 with the majority published in the last decade ($n = 16$). Study locations included the USA ($n = 7$), Canada ($n = 4$), Australia ($n = 4$), Netherlands ($n = 4$), UK ($n = 2$), Sweden ($n = 1$) and Romania ($n = 1$). All but one study, who recruited from residential homes, recruited participants from community settings. The majority of studies were randomised controlled trials (RCTs; $n = 16$) with the remaining studies using controlled trials ($n = 3$), pre-post ($n = 2$) or multiple baseline designs ($n = 2$). While the majority of studies recruited participants using advertisements, several studies recruited a random sample of participants from previous studies (e.g., Bichescu, Neuner, Schauer & Elbert 2007; Zautra, 2012), recruited through referrals from other healthcare professionals (e.g., Chew-Graham et al., 2007; Guirguis-Younger, Cappeliez & Younger, 2008; Joling et al., 2011; McMurchie, Macleod, Power, Laidlaw & Prentice 2013; O'Moore et al., 2018; Seeley, Manitsas & Gau, 2017) or used a combination of advertisements and referrals from healthcare professionals (e.g., Jones, 2016).

The majority of participants included in the study interventions were female (estimated percentage: 69.7%, range 12.5% - 92%) with only three studies having a higher percentage of male than female participants. The estimated mean age of participants in the intervention groups is 67.9 years of age (age range 40 – 96 years). The majority of studies ($n = 19$) had a lower age limit of at least 55 years of age: ≥ 55 ($n = 4$); ≥ 60 ($n = 12$); ≥ 65 ($n = 2$); ≥ 75 ($n = 1$) and four studies reported a lower age limit of ≥ 40 or ≥ 50 but had a mean age (M_{age}) of at least 50. Although participants in the majority of the included studies were drawn from self-selecting community samples, they can all be considered to be analogue samples (i.e., drawn from the community but with clinical symptoms). The utility of analogue samples has been evidenced to provide accurate and meaningful information about clinical samples (e.g., Abramowitz et al., 2014). The most common mental health

problems reported in the studies were depression ($n = 15$), anxiety ($n = 4$), depression and/or anxiety ($n = 2$), post-traumatic stress disorder (PTSD; $n = 1$) and psychological distress ($n = 1$). Approximately half of the studies ($n = 11$) explicitly excluded participants who had a cognitive impairment and/or dementia. The remaining studies either did not report exclusion criteria relating to cognitive difficulties or, excluded participants whose cognitive abilities may have been compromised due to taking substances (e.g., high alcohol intake, sedative medications) or as a result of schizophrenia and psychosis. All three of the studies that reported on participant ethnicity or race (Floyd, Scogin, McKendree-Smith, Floyd. D., & Rokke, 2004; Seeley et al., 2017; Shah, 2010) reported a Caucasian/white majority (range 88% - 97%). Of the 18 studies that reported on educational attainment, twelve studies reported that approximately half of their sample had engaged in higher education (estimated *M percentage* = 52%, range 41 – 75%). Three studies (Jones, 2016; Shah, 2010; Walker et al., 2010) reported the inclusion of participants from both urban and rural locations.

A wide range of outcome measures were used ($n = 20$) with the Hamilton Rating Scale for Depression (HRSD), Geriatric Depression Scale (GDS) and Patient Health Questionnaire (PHQ-9) most commonly used. Further exploration of the measures used within intervention modalities showed that 14 different outcome measures were used across bibliotherapy interventions (with the HRSD and GDS used in 5 of the 11 studies) and 12 outcome measures were used across the iCBT interventions (with the PHQ-9 used in 4 of the 7 studies). Twenty-one of the twenty-three studies utilised at least one mental health outcome measure that was valid for use with older adults. Twelve studies had follow-up measures from ≥ 3 months post intervention with measures collected at three months only ($n = 5$), six months ($n = 1$), 12 months ($n = 4$) and 24 months ($n = 2$).

Table 1. Study Characteristics

Author, Year & Setting	Design	Intervention	N, Mage (SD/range) female %	Control	N, Mage (SD/range) female %	Mental Health Measures	Intervals
Bichescu (2007) Romania, <i>Former political prisoners</i>	RCT	Group psycho-education session	9, 69.8 (6.0/55+) 12.5%	NET	9, 68.9 (4.4) 0.0%	CIDI (PTSD section), BDI	Pre & 6 mo FU
Chew-Graham (2007) UK, <i>Community</i>	Feasibility RCT	Guided CBT self-help	53, 75 (60-92) 39.0%	CAU	52, 76 (60-92) 37.0%	SCID, HSCL-20	Pre & 1 mo FU
Dear (2012) Australia, <i>Community</i>	Pre-post	Guided iCBT	20, 63.4 (5.1/60+) 65.0%	N/A	N/A	PHQ-9, GDS, GAD-7, K-10	Pre-post & 3 mo FU
Dozeman (2011) Netherlands <i>Residential homes</i>	Feasibility RCT	Guided BT self-help	67, 83.7 (6.7/60+) 68.7%	CAU	62, 84.2 (6.8) 80.6%	CES-D, HADS-A	Pre-post
Floyd (2004) USA, <i>Community</i>	RCT	Guided cog. bibliotherapy	[46, 68 (60-80) 76.0%]	DT CP	Not reported	HRSD, GDS, BSI (GSI item)	Pre, mid, post & 3 mo FU
Guirguis-Younger (2008) Canada, <i>Community</i>	Multiple-baseline	Guided beh. bibliotherapy	[6, (62-85) 33.0%]	N/A	N/A	HRSD, GDS	Pre, weekly, post & 3 mo FU
Joling (2011) Netherlands, <i>Community</i>	RCT	Guided CBT Bibliotherapy	86, 81.8 (3.8/75+) 69.8%	CAU	84, 81.1 (3.5) 77.4%	CES-D	Pre-post

Jones (2016) Canada, <i>Community</i>	RCT & PR	Guided iCBT	24, 64.8 (3.7/60+) 91.7%	WL	22, 65.5 (4.7) 81.8%	GAD-7, PSWQ-A, GAI, GDS, PHQ-9	Pre-post & 1 mo FU
Lamers (2014) Netherlands, <i>Community</i>	RCT	Guided, online life-review self- help	58, 56.3 (10.3/40+) 75.9%	WL expressive writing	58, 56.64 (9.1) 77.6% 58, 56.86 (7.9) 77.6%	CES-D, HADS-A, MHC-SF	Pre, 2 wks post & 6, 12 mo FU
Landreville (2016) Canada, <i>Community</i>	Multiple- baseline	Guided CBT self-help manual	3 67.7 (65+)	N/A	N/A	GAD-7, PSWQ-A , GAI	Pre, baseline, 2 wks post & 6, 12 mo FU
Landreville (1997;98) Canada, <i>Community disability sample</i>	RCT	Guided cog. bibliotherapy	10, 71.8 (5.6/55+) 90.0%	DT	13, 72.15(7.0) 84.6%	GDS, BDI, IDD	Pre, post & 6, 12, 18, 24 mo FU
McMurchie (2013) U.K, <i>Clinical</i>	CT	iCBT	33, 71.6 (4.4/65+) 75.8%	CAU	20, 75.55 (6.3) 70.0%	GDS, GAI, CORE-34	Pre, 2 mo, post & 1 mo FU
O' Moore (2018) Australia, <i>Community</i>	RCT	Guided iCBT & CAU	44, 63.2 (7.4/50+) 86.4%	CAU	25, 59.68 (6.0) 68.0%	PHQ-9, K-10, MINI	Pre-post & 3 mo FU
Scogin (2014) USA, <i>Community</i>	CT	Guided cog. bibliotherapy (GCB)	[53 , 68.4 (6.6/60+) 70.0%]	WL GCB & MT	Not reported	HRSD, GDS	Pre, post & 1 mo FU

Scogin (1989 & 1990) USA, <i>Community</i>	RCT	Guided beh. bibliotherapy Guided cog. bibliotherapy	23, 70.3 (8.5/60+) 78.2% 22, 66.9(5.30/60+) 90.9%	DT	22, 67.77 (6.5) 86.4%	HRSD, GDS	Pre, post & 6, 24 mo FU
Scogin (1987) USA, <i>Community</i>	CT	Guided cog. bibliotherapy	10, 70.8 (60+) 80.0%	DT Logo-therapy book	11, 70.8 72.7% 8, 68.5 87.5%	HSRD, BDI	Pre, post & 1 mo FU
Seeley (2017) USA, <i>Clinical</i>	Feasibility RCT	Guided peer-facilitated CBT Workbook	[62 , 74.2 (10.7/55+) 81%]	WL	31 Not reported	PHQ-9, GAD-7	Pre-post
Shah (2010) USA, <i>Community</i>	RCT	Guided audio CBT & workbook	17, 65.7 (8.5/55+) 76.5%	DT	17, 61.53(5.57) 82.4%	GDS, HRSD, BSI	Pre-post
Silfvernagel (2018) Sweden, <i>Community</i>	RCT	Guided iCBT	33, 66.7 (60-77) 66.7%	Clinician attention	33, 65.5 (60-73) 84.8%	BAI, PHQ-9, GAD-7, MADRS-S, CORE	Pre-post & 12 mo FU
Spek (2007 & 2008) Netherlands, <i>Community</i>	RCT	iCBT	102, 55 (4.9/50+) 67.6%	WL Group CBT	100, 55(5) 59.0% 99, 54(3.9) 63.6%	BDI	Pre-post & 12 mo FU

Walker (2010) Australia, <i>Community</i>	RCT	Guided mental health literacy modules	452, 66.1 (4.3/60+) 59.7%	Pain info modules	448, 65.78 (4.2) 60.7%	PHQ-9	Pre, 6 wks , 6, 12, post (24 mo)
Zautra (2012) USA, <i>Community</i>	RCT	Guided cog. therapy Mindfulness voicemail	[73, 54 (6.5/40+) 82%]	Physical health tips	24 Not reported	DDS (3 item), SF-36 emotional subscale, negative & positive affect scale	Daily
Zou (2012) Australia, <i>Community</i>	Pre-post feasibility trail	Guided iCBT	22, 66 (4.6/60+) 68%	N/A	N/A	GAD-7, DASS-21, PHQ-9, K-10	Pre-1 wk post & 3 mo FU

Note. **beh** = behavioural; **CAU** = care as usual/ **cog** = cognitive; **CP** = cognitive psychotherapy **CT** = controlled trial; **DT**= delayed treatment; **FU** = follow-up; **GCB** = guided cognitive bibliotherapy; **MT** = memory training; **N/A** = not applicable/ **NET** = narrative exposure therapy; **PR** = partial replication; **RCT** = randomised controlled trial; **WL** = waiting-list; **[]** = overall *N*, *Mean (SD/range)*, *female %*. Measures: **BDI** = Beck Depression Inventory/**BSI** = Brief Symptom Inventory/**CES-D** = Centre for Epidemiological Studies Depression/**CORE-34** = Clinical Outcomes in Routine Evaluation/**CIDI** = Composite International Diagnostic Interview/**DASS-21** = Depression Anxiety Stress Scales/**DDS** = Daily Depression Scale/**GAD-7** = Generalised Anxiety Disorder 7-item Scale/**GAI** = Geriatric Anxiety Inventory/**GDS** = Geriatric Depression Scale/**GSI** = Global Severity Index/**HADS-A** = Hospital Anxiety and Depression Scale/**HRSD** = Hamilton Rating Scale for Depression/**HSCL-20** = Hopkins symptom checklist for depression /**IDD** = Inventory to Diagnose Depression/**K-10** = Kessler 10-item Scale (psychological distress)/**MADRS-S** = Montgomery Asberg Depression Scale Self-Rated/**MHC-SF** = Mental Health Continuum Short Form/**PHQ-9** = Patient Health Questionnaire (depression)/**PSWQ-A** = Penn State worry questionnaire-abbreviated/**SCID** = structured clinical interview for DSM IV depression/**SF-36** = Rand 36-item Short Form Health Survey.

Intervention characteristics

A wide range of intervention modalities and durations were reported across studies. Low-intensity psychological interventions consisted of iCBT ($n = 7$), bibliotherapy ($n = 8$), self-help ($n = 4$), psychoeducation ($n = 2$), and audio interventions ($n = 2$). Upon further investigation there was considerable overlap between interventions labelled as 'self-help' and those labelled as 'bibliotherapy'; all but one 'self-help' intervention study (e.g., Lamers, Bohlmeijer, Korte, & Westerhof, 2014) utilized written CBT or behavioural therapy resources as their intervention. Therefore, three of the four interventions involving 'self-help' (Chew-Graham et al., 2007; Dozeman et al., 2011; Landreville, Gosselin, Grenier, Hudon & Lorrain, 2016) were added to the bibliotherapy list.

Twenty-one of the reported interventions were guided. Interventions were considered to be 'guided' if there was any contact from researchers/clinicians regarding the intervention during the intervention phase. The majority of guided interventions reported weekly contact with participants in order to offer guidance and monitor progress. However, some studies also reported the provision of support and encouragement. Guidance ranged from ≤ 5 minutes to 60 minutes per participant and was delivered via telephone ($n = 7$), face-to-face ($n = 5$), via a mix of telephone and face-to-face contact ($n = 3$), via email ($n = 4$) or via a mix of email and telephone contact ($n = 2$).

All but one intervention (group-based; Bichescu et al., 2007) were completed remotely in the participants' own homes. Interventions spanned four weeks to 24 months with as few as one and as many as 24 modules or sessions. Nine interventions can be considered 'brief' (e.g., 1 - 6 modules/sessions over 1 - 2 months), 13 can be considered 'moderate' (e.g., 7 - 12 modules/sessions over 1 - 4 months) and one can be considered a longer term intervention (e.g., 15 modules over two years). The majority of interventions ($n = 15$) targeted mild-to-moderate depression while four interventions targeted anxiety. A total of three interventions targeted subthreshold anxiety and/or depressive symptoms. Table 2 shows an overview of the low-intensity psychological interventions included in this review.

Table 2. Intervention details

	Author & Year	Diagnosis	Intervention, duration, # sessions, length & clinical contact
BIBLIOTHERAPY	Chew-Graham (2007)	Dep	CBT self-help 'SHADE manual'; 12 wks 6 Ff & 5 Tel (psychoeducation & signposting)
	Dozeman (2011)	Dep/Anx ^a	BT: <i>Coping with Depression</i> ; Activity Scheduling; 4s 2-5 Ff, guidance/monitoring only ^b
	Floyd (2004)	Dep	CT ' <i>Feeling Good</i> '; 4 wks 4 Tel ≤ 5 min, guidance/monitoring only
	Guirguis-Younger (2008)	Dep	BT ' <i>Control your Depression</i> '; 6 wks/6s 6 Ff ≤ 15min (provided support and clarified material)
	Joling (2011)	Dep ^a	CBT leaflet & ' <i>Coping with Depression</i> '; 12 wks 3 Ff ≤ 60min & 2 Tel, guidance/monitoring only
	Landreville (2016)	GAD	CBT self help manual; 15 wks/ 8s 2 Ff & 15 Tel (30min) guidance/monitoring only
	Landreville (1997; 1998)	Dep	CT ' <i>Feeling Good</i> '; 4 wks 4 Tel (15min), guidance/monitoring only
	Scogin (2014)	Dep	CT ' <i>Feeling Good</i> ' + memory training; 4 wks/24x1hr 4 Tel (10min), guidance/monitoring only ^b
	Scogin (1989;1990)	Dep	BT ' <i>Control your Depression</i> '/CT ' <i>Feeling Good</i> ';4wks 4 Tel (≤ 5mins), guidance/monitoring only ^b
	Scogin (1987)	Dep (mild-mod)	CT ' <i>Feeling Good</i> '; 4 wks 4 Tel (10min), guidance/monitoring only ^b
	Seeley (2017)	Dep/Anx (mild-mod)	CBT Workbook ' <i>5 Areas</i> '; 10s 10 Ff (weekly), guidance only
INTERNET DELIVERED	Dear (2012)	Dep	iCBT ' <i>Managing your Mood</i> '; 8 wks Email (16 automated & 1.6 manual pp) & Tel (36.1min pp)
	Lamers (2014)	Dep (mild-mod)	Online life review ' <i>The stories we live by</i> ' 10 wks/7s Weekly emails (guidance, encouragement & questions)
	Jones (2016)	GAD ^a	iCBT ' <i>GAD online for older adults</i> ' 7s 7 Online 'check in' & weekly email (guidance & support)
	McMurchie (2013)	Dep	iCBT ' <i>Beating the Blues</i> '; 8 wks/ 8x1hr No clinical contact

	O'Moore (2018)	MDD	iCBT sadness programme + CAU; 6s Email contact to answer questions
	Silfvernagel (2018)	Anx	individually tailored iCBT; 8 wks Email feedback on homework
	Spek (2007; 2008)	Dep	iCBT; 8wks/8s No clinical contact
	Zou (2012)	Anx (mild+)	iCBT ' <i>Managing Stress and Anxiety</i> '; 8 wks, 5s Online discussion forum + automatic emails ($M = 17.23$) & weekly tailored email ($M = 1.23$) /Tel
PE	Bichescu (2007)	PTSD	1 group session of psychoeducation regarding the nature and prevalence of PTSD
	Walker (2010)	Elevated distress	Mental health literacy; 24 mo/15modules 5 Tel, guidance & motivate engagement ^b
AUDIO	Shah (2010)	Dep	Audio CBT ' <i>making the golden years golden again</i> ' & workbook, 1 mo/8x 30-60min CDs 4 Tel (weekly) ^b
	Zautra (2012)	Dep (mild+)	CT: 'Personal Mastery'; 27 days, daily 1 Ff (psychoeducation) & daily automated Tel (monitoring/ encouragement) 'Mindful Awareness'; 27 days, 1 Ff (2 brief mindfulness exercises) & daily automated guided - meditation voicemails

Note. **Anx** = anxiety; **BT** = behavioural therapy; **CD** = compact disk; **CT** = cognitive therapy; **Dep** = depression; **Ff** = face-to-face; **GAD** = generalised anxiety disorder; **m** =modules; **MDD** = major mood disorder; **mod** = moderate; **PE** = Psychoeducation; **pp** = per person; **PTSD** = post traumatic stress disorder; **s** = sessions; **Tel** = telephone; **wks** = weeks.
^a = subthreshold; ^b = counselling prohibited.

Appraisal of Methodological Quality

Overall, the methodological quality of the studies can be considered to be good. As shown in Table 3 scores ranged from 12/16 – 15/16 for uncontrolled studies and from 15/24 to 22/24 for RCTs, with higher scores indicating higher methodological quality. Overall, areas of methodological strength across studies were the inclusion of aims and hypotheses, prospective data collection, inclusion of a comparison group and use of endpoints appropriate to the aims of the study. However, prospective power calculations were rarely reported across studies and statistical analyses for half of the studies are considered underpowered, highlighting an area of methodological weakness. Furthermore, the majority of studies utilised self-

selecting methods of recruitment and did not seek to assess the representativeness of their sample. Nevertheless, there was no apparent pattern between recruitment methods and study outcomes. Finally, half of the studies reported obtaining ethical approval ($n = 12$) and an additional four studies reported obtaining signed consent. A further three studies mentioned ethical considerations but not whether ethical approval or signed consent was obtained. It was not possible to determine whether ethical approval or informed consent was obtained in four of the studies.

Methodological quality across the two main intervention groups (iCBT and bibliotherapy) was also appraised separately. The iCBT studies' methodological strengths were the inclusion of hypotheses, prospective data collection, low attrition rates and/or utilisation of intention-to-treat analyses, prospective power calculations, follow-up period ≥ 3 months and the use of contemporary controls. However, only two studies used an active control; the other studies used a waiting-list control ($n = 3$) or no control ($n = 2$). The bibliotherapy studies' methodological strengths were also the inclusion of hypotheses and prospective data collection. However, an area of particular methodological weakness was the lack of prospective power calculations with only four of the eleven studies reporting one.

Outcomes of Low-intensity Psychological Interventions

Fifteen of the 23 studies reported results that supported the use of the low-intensity psychological intervention, twelve of which reported statistically significant results. A further three studies reported mixed results with some outcomes reaching statistical significance and other outcomes not reaching significance. Five studies did not find any statistically significant results in favour of the low-intensity psychological intervention. Seven of the thirteen studies that obtained follow-up measures at ≥ 3 months reported that clinical outcomes were maintained. The remaining six studies reported non-significant results ($n = 4$) or mixed results at follow-up ($n = 2$). Importantly, only one of these non-significant follow-up outcomes represented a change from post-treatment scores. Nine (60%) out of the 15 studies targeting mild-to-moderate depression and three (75%) out of the four studies targeting anxiety showed statistically significant improvement for participants' mental health scores. However, two studies that targeted both anxiety and depression did not yield any statistically or clinically significant results. See Table 4 for an overview of the study outcomes.

Across the bibliotherapy interventions, six of the eleven studies reported findings in support of bibliotherapy for older adults. Three of these studies reported statistically significant results with large effect sizes (Cohen's $d \geq 0.8$) and one study reported statistically significant results but had small effect sizes (Cohen's $d \geq 0.2$; Landreville & Bissonnette, 1997). A further study reported mixed results and four studies reported results that had not reached statistical significance, two of which were supportive of intervention effectiveness but lacked statistical power. In contrast, all seven of the iCBT interventions reported statistically significant results in favour of the treatment group with all but one (Spek et al., 2007) reporting moderate-to-large effect sizes.

Several studies reported discrepancies between completers and non-completers. Older adults and those in assisted living (e.g., Joling et al, 2011; McMurchie et al., 2013) and, participants with lower educational attainment (e.g., Scogin, Hamblin & Bentler, 1987; Scogin, Jamison & Gochneaur, 1989; Dear et al., 2012; McMurchie et al., 2013) were less likely to complete the interventions. Additionally, McMurchie et al. (2013) also found that those who reported having more experience with, and greater confidence using, computers were more likely to complete the iCBT intervention. Conversely, one study (Scogin, Fairchild, Yon, Welsh & Presnell, 2014) reported that those with greater impairment were more likely to complete the bibliotherapy intervention.

Finally, of the 23 studies, eight studies obtained participant satisfaction feedback and/or ratings with all eight of these interventions receiving positive feedback. Although most studies reported on attrition rates, only half of the studies reported on how many participants completed all of the assigned intervention materials/modules. Compliance rates varied from 31% to 100%.

Table 3. Quality Appraisal

	Author & Year	Aim	Sample	Data	Endpoints	Blindness	Follow-up	Attrition	Power	Control	Time	Baseline	Analyses	Total /24	Ethics (CASP)
BIBLIOTHERAPY	Chew-Graham ² (2007)	1	2	2	1	2	2	2	2	1	2	2	2	21	Ethical approval acquired
	Dozeman ¹ (2011)	2	2	2	1	2	2	1	2	1	2	2	1	20	Ethical approval & Informed consent obtained
	Floyd ³ (2004)	2	2	2	2	1	2	1	0	2	2	2	2	20	Cannot tell
	Guirguis-Younger ⁴ (2008)	2	1	1	2	1	2	2	0	1	1	0	2	15	Cannot tell
	Joling ¹ (2011)	2	2	2	1	1	0	2	0	1	2	2	2	17	Ethical approval acquired
	Landreville ⁴ (2016)	2	1	2	1	1	2	1	0	0	0	0	2	12	Do not state ethical approval status. Signed consent obtained
	Landreville ³ (1997; 1998)	2	1	2	2	1	1	0	0	1	2	2	1	15	Cannot tell
	Scogin ¹ (2014)	2	1	2	2	2	1	1	0	2	2	2	2	19	Ethical approval acquired Informed consent obtained
	Scogin ³ (1989; 1990)	2	1	2	2	1	2	1	0	2	2	2	2	19	Signed consent obtained
	Scogin ³ (1987)	2	1	2	2	1	1	1	0	1	1	2	1	16	Those in WL group were provided with treatment after 2 nd assessment
	Seeley ¹ (2017)	1	2	2	1	1	0	2	1	1	2	2	1	16	Signed consent obtained. Excluded participants who required immediate services
iCBT	Dear ³ (2012)	2	2	2	1	1	2	2	0	0	0	0	1	13	Ethical approval acquired
	Jones ³ (2016)	2	2	2	1	1	1	2	2	1	2	2	2	20	Phoned by clinician if inactive online for 1 week

	McMurchie ³ (2013)	1	1	1	1	1	1	2	2	1	2	1	2	16	Participants self-selected intervention assignment
	O'Moore ³ (2018)	2	1	2	2	2	2	2	2	1	2	2	1	21	Ethical approval & Informed consent obtained. Telephone check-in if mood deteriorated
	Silfvernagel ³ (2018)	2	2	2	1	1	2	2	0	2	2	1	1	18	Cannot tell
	Spek ³ (2007; 2008)	2	2	2	1	1	2	2	2	2	2	2	2	22	Ethics approval acquired & Informed consent obtained
	Zou ³ (2012)	2	2	2	1	1	2	2	2	0	0	0	1	15	Ethics approval acquired
iLR	Lamers ³ (2014)	2	2	2	1	1	2	2	2	2	2	2	2	22	Ethical approval & Informed consent obtained
PE	Bichescu ⁴ (2007)	2	2	2	1	1	2	2	0	2	2	2	1	19	Ethical approval acquired
	Walker ¹ (2010)	2	2	2	1	2	0	2	2	2	2	2	2	21	Ethics approval acquired & Informed consent obtained
AUDIO	Shah ² (2010)	2	2	2	2	2	0	2	2	1	2	2	2	21	Ethics approval acquired & Informed consent obtained. Adverse events protocol in place
	Zautra ² (2012)	2	1	2	1	2	0	1	0	2	2	2	2	17	Informed consent obtained

Note. **Aim** = A clearly stated aim; **Sample** = Inclusion of patients, **Data** = Prospective collection of data, **Endpoints** = Endpoints appropriate to the aim of the study, **Blindness** = Unbiased assessment of the study endpoint, **Follow-up** = Follow-up period appropriate to the aim of the study, **Attrition** = Loss at post treatment (*not follow-up*) less than 5%, **Power** = Prospective calculation of the study size, **Control** = An adequate control group, **Time** = Contemporary control groups, **Baseline** = Baseline equivalence of groups, **Analyses** = Adequate statistical analyses, **Ethics** = Have ethical issues been taken into consideration?

iLR = Internet based life review; **PE** = Psychoeducation; **WL** = waiting-list.

¹ = non significant; ² = mixed results; ³ = significant results; ⁴ = supportive results; **dark shading** = significance & high quality; **light shading** = mixed results/significance & moderate quality; no shading = insignificant results & any quality.

Table 4. Study outcomes

	Author & Year	N n	Uptake/Retention/Compliance	Intervention outcomes [effect sizes]	Participant satisfaction
BIBLIOTHERAPY	Floyd ¹ (2004)	[46]	67.39% retention	HRSD: $F(1,25) = 13.20^*$, $d = 1.38$ GDS: $F(1,25) = 8.01^*$, $d = 0.80$ <i>3 mo follow-up</i> HRSD: $F(1,11) = 6.31^*$, $d = 0.84$ GDS: <i>ns</i>	
	Landreville ¹ (1997 & 1998)	[23] 10	46.7% compliance (range 6.7-100%)	GDS: $F(1,21) = 5.46^*$ [$d = 0.18$] IDD: $F(1,21) = 5.71^*$ [$d = 0.28$] BDI: $F(1,21) = 14.56^{***}$ [$d = 0.03$] <i>24 mo follow-up</i> GDS, $F(5,50) = 4.12^{**}$ IDD, $F(5,50) = 10.04^{***}$ BDI, $F(5,50) = 4.38^{**}$	56.5% found book useful post tx
	Scogin ¹ (2014)	[53]	65% retention	<i>ns</i>	
	Scogin ¹ (1987)	[29] 10 11	CB = 90% retention delayed CB = 82% retention Compliance (7-point scale): CB = (4.7) delayed CB = (3.7)	HRSD: (20.64 ^{**}) GDS: (3.82 [*]) BDI: <i>ns</i> SCL-90: (9.09 ^{**}) <i>Bibliotherapy vs WL</i> [$d = 1.2 - 1.8$; <i>1 mo follow-up</i> = 0.2 – 0.8] ^a <i>Bibliotherapy vs control</i> [$d = 0.8 - 1.0$; <i>1 mo follow-up</i> = 0.3 – 0.9] ^a	Satisfaction (7-point scale): CB = 6.5, delayed CB = 5.3, logotherapy control = 5.5

Dozeman ² (2011)	[129] 67	86% uptake; 21% retention 31% compliance	<i>ns</i>	57% rated (3-item, 10-point scale) as moderate-very good (<i>M</i> = 6.3 (SD =2.2)
Joling ² (2011)	[170] 86	79% retention 41% compliance	<i>ns</i>	
Guirguis-Younger ³ (2008)	6	100% retention	N/A	
Scogin ³ (1989 & 1990)	[67] 23	91% retention 85% (5-100%) of books read	<p>Bibliotherapy vs DT HRSD: $F(1,59) = 34.91^*$ GDS: $F(1,59) = 8.09^*$</p> <p>Cognitive Bibliotherapy HRSD: $F(1,40) = 25.65^*$ [<i>d</i> = 0.97] GDS: $F(1,37) = 10.65^*$ [<i>d</i> = 0.27]</p> <p>Behavioural Bibliotherapy HRSD: $F(1,38) = 20.16^*$ [<i>d</i> = 1.5] GDS: <i>ns</i></p>	
Chew-Graham ⁴ (2007)	[105] 53		<p>1 mo follow-up SCID: ES = 0.32 (95% [CI] = 0.11 to 0.95* HSCL-20: <i>ns</i></p>	Intervention was acceptable to most participants (semi-structured interview)
Landreville ⁴ (2016)	3	100% retention	<p>Reliable change index scores per participant >1.96 PSWQ-A: (-8.15, -6.11, -6.62) GAD-7: (-6.34, -2.72, -4.98) GAI: (-4.14, -3.01, -4.51) GDS: (-5.82, -5.50, -2.59)</p>	Intervention was acceptable to most participants (semi-structured interview)

	Seeley ⁴ (2017)	[62] 31	89% retention	PHQ-9: $d=0.43$, <i>ns</i> GAD-7: $d=0.28$, <i>ns</i> <i>MCID score</i> PHQ-9: (OR = 4.89, 95% CI [1.48, 16.12]** GAD-7: <i>ns</i>	<i>M</i> (SD) satisfaction (4-point scale) = 3.1 (0.9). 100% reported they would recommend it to others
iCBT	Dear (2012)	20	80% retention	PHQ-9: ($t_{19} = 5.41^{***}$) GDS: ($t_{19} = 5.98^{***}$) GAD-7: ($t_{19} = 4.23^{***}$) K-10: ($t_{19} = 5.29^{***}$) <i>Pre - post & pre - 3 mo follow-up</i> ^a PHQ-9 & GDS: d range = 1.17 - 2.04	82% satisfied with intervention (two binary questions: recommend to a friend/worth their time)
	Jones (2016)	[66] 24	91% retention	GAD-7: $z = -2.28^{**}$, $d = .85$ PHQ-9: $z = -2.83^{**}$, $d = 1.17$ PSWQ-A: $z = -3.57^{***}$ $d = 0.77$ GAI: $z = -3.64^{***}$ $d = 0.82$ GDS: $z = -3.85^{***}$ $d = 0.78$ <i>1 mo follow-up</i> ^a GAD: ($t(17) = 1.91^{*}$) reduced Other scores maintained	

McMurchie (2013)	[58] 33	56.9% uptake 72.7% retention	<p>GDS: $t(51) = 2.96^{**}$, $d = 0.85$ GAI: $t(51) = 2.05^*$, $d = 0.59$ CORE: $t(51) = 2.92^{**}$, $d = 0.84$</p> <p><i>1 mo follow-up</i> GDS: $t(51) = 2.78^{**}$, $d = 0.80$ GAI: $t(51) = 2.40^*$, $d = 0.69$ CORE: $t(51) = 2.23^*$, $d = 0.61$</p>	
O'Moore (2018)	[69] 44	84% retention	<p>PHQ-9: $F(3,191.03) = 9.82^{***}$, Hedges $g = 1.01$ K-10: $F(3,190.06) = 6.37^{***}$, Hedges $g = 0.75$</p> <p><i>3 mo follow-up^a</i> PHQ-9: Hedges $g = 0.90$ K-10: Hedges $g = 0.94$</p>	95% 'somewhat' – 'very' satisfied
Silfvernagel (2018)	[60] 33	67% retention 33% compliance	<p>BAI: $F(1,57.0) = 4.7^*$, $d = 0.50$ GAD-7: $F(1,52.6) = 5.6^*$, $d = 0.67$ MADRS-S: $F(1,53.0) = 8.3^{**}$, $d =$ 0.61 PHQ-9: $F(1,56.1) = 8.75^{**}$, $d = 0.62$ CORE-OM: $F(1,55.2) = 7.2^{**}$, $d =$ 0.83</p> <p><i>12 mo follow-up^a</i> d range = 0.63 – 1.13</p>	

	Spek (2007 & 2008)	[301] 102	64% retention 78.1% compliance	iCBT vs. WL: BDI: $ES (d_{improvement}) = .55^* [d = 0.26]$ 12 mo follow-up BDI: $ES (d_{improvement}) = .53^* [d = 0.26]$	
	Zou (2012)	22	100% retention	GAD-7: $t_{21} = 7.03^{***}$, $d = 1.65$ DASS-21: $t_{21} = 5.99^{***}$, $d = 1.54$ PHQ-9: $t_{21} = 5.17^{***}$, $d = 1.22$ K-10: $t_{21} = 8.30^{***}$, $d = 1.23$ 3 mo follow-up ^a GAD-7: $d = 1.03$ DASS-21: $d = 0.98$ PHQ-9: $d = 0.53$ K-10: $d = 0.69$	All participants rated the intervention as worthwhile
Internet LR	Lamers (2014)	[174] 58	75.9% retention	CES-D: $d = 0.35^{**}$ MHC-SF emotional: $d = 0.16^*$ MHC-SF psychological: $d = 0.27^*$ HADS-A: <i>ns</i> LR vs. control at 12 mo follow-up ^a CES-D: $d = 0.16$ MHC-SF emotional: $d = 0.01$ MHC-SF psychological: $d = -0.29$ HADS-A: $t = 2.42^*$, $d = 0.06$ (reduction)	<i>M</i> (SD) satisfaction (10- point scale) = 7.3 (1.27)
PE	Bichescu (2007)	[18] 9	100% retention	<i>ns</i>	

	Walker (2010)	[909] 452		<i>ns</i>	
AUDIO	Shah (2010)	[34] 17	85.3% retention 66% compliance	HRSD: $F(1,31) = 4.14^*$, $d = 0.87$ GDS: <i>ns</i>	80-95% satisfaction (9-item satisfaction questionnaire)
	Zautra (2012)	[73]	CT = 79.31% compliance MA = 75.86% compliance	CT Depression: $\beta = -.065 (.145)^{***}$ Negative affect: $\beta = -.037 (.154)^{***}$ Role emotion subscale: $\beta = 1.397 (.027)^*$ Positive affect: <i>ns</i> MA Depression: $\beta = -.052 (.099)^{***}$ Negative affect: $\beta = -.024 (.020)^*$ Role emotion subscale: $\beta = 1.586 (.045)^{**}$ Positive affect: : $\beta = .058 (.130)^{***}$ _b	Both interventions were favourably appraised by participants

Note. **CB** = cognitive bibliotherapy; **CT** = cognitive therapy; **DT** = delayed treatment; **d** = Cohen's d; [**I**] = calculated Cohen's d; **ES** = effect size; **LR** = Life Review; **M** = mean; **MA** = mindful awareness; **MCID** = minimal clinically important differences; **PE** = Psychoeducation; **SD** = standard deviation; **tx** = treatment; **WL** = waiting-list. Measures: **BDI** = Beck Depression Inventory/**CES-D** = Centre for Epidemiological Studies Depression /**CORE-34** = Clinical Outcomes in Routine Evaluation/ **CIDI** = Composite International Diagnostic Interview/**DASS-21** = Depression Anxiety Stress Scales/**GAD-7** = Generalised Anxiety Disorder 7-item Scale/**GAI** = Geriatric Anxiety Inventory/**GDS** = Geriatric Depression Scale/**HADS-A** = Hospital Anxiety and Depression Scale/**HRSD** = Hamilton Rating Scale for Depression/**HSCL-20** = Hopkins symptom checklist for depression /**IDD** = Inventory to Diagnose Depression/**K-10** = Kessler 10-item Scale (psychological distress)/**MADRS-S** = Montgomery Asberg Depression Scale Self-Rated/**MHC-SF** = Mental Health Continuum Short Form/**PHQ-9** = Patient Health Questionnaire (depression)/**PSWQ-A** = Penn State worry questionnaire-abbreviated/**SCID** = structured clinical interview for DSM IV depression.

¹ = 'Feeling Good' resource; ² = 'Coping with Depression' resource; ³ = 'Control your Depression' resource; ⁴ = miscellaneous.

^a Treatment gains maintained but no *p* values present

^b = effect sizes in parentheses.

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Discussion

There is an identified need for timely, cost-effective mental health interventions for older adults (WHO, 2017). Global initiatives have highlighted the need to find ways to better support older adults' mental health (Mental Health Commission of Canada, 2012; The Scottish Government, 2016, Royal Australian and New Zealand College of Psychiatrists, 2011). This review appraises the evidence of low-intensity psychological interventions for improving the mental health of older adults and sheds light on the types of interventions that have been tried and tested, including bibliotherapy, iCBT, internet-based life review, psychoeducation and audio-delivered CBT/mindfulness/cognitive therapy. The literature search suggests that interest in low-intensity psychological interventions for older adults has increased substantially in the past decade with the majority of studies published during or after 2008. To our knowledge, this review is the first to systematically assess the quality and efficacy of iCBT interventions for older adults. Furthermore, an additional six studies describing bibliotherapy interventions (Chew-Graham et al., 2007; Dozeman et al., 2011; Guirguis-Younger et al., 2008; Landreville et al., 2016; Scogin et al., 2014; Seeley et al., 2017), not previously considered in other reviews (e.g., Holvast et al., 2017; Pinquart et al., 2007; Scogin et al., 2005), were identified and appraised in this review.

Outcomes

The findings from this review provide tentative evidence to support the use of guided, low-intensity psychological interventions for mild-to-moderate mental health problems in older adults in general. In particular, the use of both bibliotherapy and iCBT appear to be well evidenced. The diversity of the remaining interventions included in the review, hinders establishment of their wider efficacy and generalisability. Furthermore, given that almost all interventions were guided and involved some clinician contact, the appropriateness of low-intensity psychological interventions that are not guided remains unknown.

Previous reviews unanimously supporting the efficacy of bibliotherapy for older adults utilised five (Floyd et al., 2004; Joling et al., 2011; Landreville & Bissonnette, 1997; Scogin et al., 1989; 1987) of the 11 studies included here. The

inclusion of an additional six studies that described bibliotherapy interventions has yielded results that are more heterogeneous. Indeed, while Holvast et al. (2017) included the bibliotherapy study by Joling et al. (2011) in their review they did not mention the non-significant findings in their conclusion but focussed on the four studies that did report statistical significance. Interestingly, the two bibliotherapy interventions that targeted subthreshold anxiety and/or depression did not yield any significant results (Dozeman et al., 2011; Joling et al., 2011). It is possible that the outcome measures used were not sensitive enough to distinguish any change in scores and that a floor effect may have been present. Furthermore, these two studies both reported high attrition rates, relied on the same bibliotherapy materials '*Coping with Depression*' and used participants who were considerably older than in other interventions (e.g., Mage of >80 years). Therefore, the use of low-intensity psychological interventions for subthreshold symptoms in very old adults is unsupported. Furthermore, given that neither of the interventions which targeted both anxiety and depression demonstrated significant results caution in delivering such interventions is recommended.

In line with self-management approaches (Crepaz-Keay, 2010; Deci & Ryan, 2015) it is suggested that guided, low-intensity psychological interventions do improve older adults' mental health as measured by clinician and self-reported screening and/or diagnostic tools. All of the studies that reported significant results post treatment and included follow-up measures at ≥ 3 months demonstrated maintenance of treatment gains at follow-up. Interestingly, although choice is considered an important aspect of mental health treatment (National Health Service, 2018; Raue & Sirey, 2011), RCTs are designed to reduce the bias that such choice might otherwise bring. Only one of the intervention studies (McMurchie et al., 2013) allowed participants to choose between the low-intensity (iCBT) intervention or treatment as usual arguably providing a research environment that may more closely replicate a mental health service setting.

Acceptability

Given the increased risks of polypharmacy in this population (Cahir et al., 2010), the provision of alternative treatments for mental health problems is imperative. Overall, only one third of studies obtained feedback from participants about their satisfaction with the intervention. Although feedback was generally positive, such

evidence usually relied on one or two questions and was sought informally. It is unclear whether anonymised methods for providing feedback were provided. Indeed, the possible lack of anonymity and absence of more nuanced tools to measure satisfaction may have led to inflated satisfaction ratings. Future research should strive to include measures of participant satisfaction and acceptability as these are evidenced to contribute to intervention improvement (Mayston et al., 2017) and may be especially important indicators of intervention success for those who are completing such interventions remotely.

Target Populations

The evidence-base relies predominantly on female participants, those in their 60's, older adults with mild-to-moderate depression, those with higher educational attainment, who live in the community (often in urban areas) in developed, Western countries and who self select to participate in intervention studies. The paucity of data on participant ethnicity was surprising. Given that those who are female (Mackenzie, Gekoski & Knox, 2006) and who have higher educational attainment (Bonabi et al., 2016) are already more likely to access services, future research should strive to include equal numbers of male and female participants and participants from lower socio-economic backgrounds. Furthermore, only three studies explicitly recruited participants from both rural and urban areas. Given difficulties in mental health service accessibility (National Healthcare Disparities Report, 2010) and difficulties with internet infrastructure for those living in rural compared with urban areas (Duzaro et al., 2011) future research should strive to include rural-dwelling participants.

Interestingly, almost half of the studies did not explicitly exclude those with cognitive impairment. Nevertheless, whether participants with cognitive impairment were in fact included in the intervention studies remains unclear. Psychological interventions may have differing effects on older adults with cognitive impairments compared with older adults without such impairments (Pinquart et al., 2007). Given that those with cognitive impairment may be at increased risk of experiencing depressive symptoms (Singh-Manoux, 2017) it may be particularly important for facilitators of low-intensity psychological interventions to (a) consider the usefulness of these interventions for those with comorbid cognitive and mental health difficulties and (b) evaluate how such interventions could be adapted in order to be inclusive of this client group.

Limitations

Half of the included studies reported statistically significant results in favour of the low-intensity psychological interventions, including all of the iCBT interventions. Although, the moderate-to-large effect sizes reported in the iCBT interventions are impressive, the iCBT studies relied predominantly on either comparisons with waitlist controls or no comparison at all. Only half of the bibliotherapy interventions reached significance. Given that the bibliotherapy interventions had smaller sample sizes, due to higher attrition rates, than the iCBT interventions, it is possible that these analyses lacked statistical power to detect small effects.

Half of the included studies did not achieve adequate sample sizes which raises concerns about the reliability and generalisability of the findings and increases the chances of Type II errors. In particular, the studies on bibliotherapy reported the highest levels of attrition across interventions whilst the studies on iCBT did not report this difficulty despite having longer intervention times and follow-up times in general. One possibility is that the iCBT interventions were more interactive and engaging than the bibliotherapy interventions. Furthermore, participants in the iCBT intervention tended to be younger ($M_{age} = 64.4$) than those in the bibliotherapy interventions ($M_{age} = 72.03$) suggesting that age may have been a mediating factor. However, a recent study comparing iCBT to bibliotherapy in an adult sample (Smith et al., 2017) found that attrition rates between these interventions did not differ. Similarly, Stein-Shvachman, Karpas and Werner (2013) also concluded that differences in attrition rates between psychological interventions, across younger and older adults, is inconsistent in the literature.

Interestingly, only half of the studies reported obtaining ethical approval. Given the increased vulnerability of the population samples used (e.g., older adults and those with mental health problems; WHO, 2018b) ethical considerations are paramount. Furthermore, older adults are at increased risk of cognitive impairment suggesting that informed consent is also an important factor in research with, and interventions for, older adults.

Due to the wide range of outcome measures used and the inconsistent use of control groups across the evidence base for iCBT conducting a meta-analysis was

not feasible. However, given that research on iCBT for older adults appears to be on the increase, completion of a meta-analysis may be an appropriate option in the near future.

There are several limitations of this review. Due to the limited number of studies describing low-intensity psychological interventions for older adults two compromises were made: Firstly, the minimum age limit falls below what can be considered to be 'older adult'. For example, studies which included participants aged ≥ 40 were included in this review as long as a mean age of ≥ 50 was reported for the total sample. Therefore, the findings are not strictly based on data from older adults alone.

Secondly, this study included a wide range of low-intensity psychological interventions permitting that improved mental health was the primary target of the intervention. The heterogeneity of the interventions included in this review means that it is difficult to draw conclusions about all types of low-intensity psychological interventions.

Finally, we were unable to find any grey literature. Although three of the included studies did not report any statistically significant results, the majority of the included studies did. It is possible that a positive results bias is present in the older adult intervention literature whereby studies that do not support the use of low-intensity psychological interventions are not submitted, or indeed accepted, for publication.

Conclusion

In conclusion, low-intensity psychological interventions focussed on either treating depression or anxiety are likely to benefit older adults, in their 60s and 70s, who are experiencing mild-to-moderate depression or anxiety. More specifically, iCBT interventions were effective at reducing both anxiety and depression symptoms while bibliotherapy was only evidenced to be effective at reducing depression but not anxiety symptoms. The provision of clear information about what the low-intensity psychological intervention entails and the availability of clinician guidance and mental health monitoring throughout the duration of the intervention is essential. Future research should strive to better understand and reduce the mental healthcare inequalities between rural and urban populations by seeking

involvement from rural-dwelling older adults. Increasing the availability of low-intensity psychological interventions to all will provide more options to mental health service consumers thereby promoting a less prescriptive approach to mental healthcare. This approach may help to facilitate autonomy and competence in older adult consumers.

Clinical Implications

- Guided iCBT and bibliotherapy are likely to benefit older adults in their 60s and 70s experiencing mild-to-moderate levels of depression-
- Guided iCBT is also likely to benefit older adults in their 60s and 70s experiencing mild-to-moderate levels of anxiety.
- The usefulness of such interventions for older adults (aged 80+), those with subthreshold symptoms, men and those from lower socio-economic backgrounds remains unknown.
- Providing the option of low-intensity psychological intervention, particularly iCBT, may help to increase participant engagement with treatment.

References

- Abramowitz, J.S., Fabricant, Taylor, S., Deacon, B.J., McKay, D., & Storch, E.A. (2014). The relevance of analogue studies for understanding obsessions and compulsions. *Clinical Psychology Review*, 34(3), 206-217.
- American Psychological Association: APA (2017). *Mental and Behavioral Health in Older Americans*. Retrieved from:
<http://www.apa.org/about/gr/issues/aging/mental-health.aspx>
- Andrews, G., Cuijpers, P., Craske, M.G., Mcevoy, P., & Titov, N. (2010). Computer therapy for the anxiety and depressive disorders is effective, acceptable and practical health care: A meta-analysis. *PLoS ONE*, 5(10), E13196.
- Bandura, A. (1988). Self-efficacy conception of anxiety. *Anxiety Research*, 1, 77-98.
- Bichescu, D., Neuner, F., Schauer, M., & Elbert, T. (2007).** Narrative exposure therapy for political imprisonment-related chronic posttraumatic stress disorder and depression. *Behaviour Research and Therapy*, 45(9), 2212. Retrieved from <https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/214421653?accountid=10673>
- Bonabi, H., Müller, M., Ajdacic-Gross, V., Eisele, J., Rodgers, S., Seifritz, E., . . . Rüsch, N. (2016). Mental Health Literacy, Attitudes to Help Seeking, and Perceived Need as Predictors of Mental Health Service Use: A Longitudinal Study. *The Journal of Nervous and Mental Disease*, 204(4), 321-324.
doi:10.1097/NMD.0000000000000488
- British Psychological Society (2011). *Generalised Anxiety Disorder in Adults*. Management in Primary, Secondary and Community Care. National Collaborating Centre for Mental Health (UK). ISBN-13: 978-1-904671-42-8.
Retrieved from: <https://www.ncbi.nlm.nih.gov/books/NBK83456/>
- Bryant, C. (2010). Anxiety and depression in old age: challenges in recognition and diagnosis. *International Psychogeriatrics*, 22(4), 511-513
- Cahir, C., Fahey, T., Teeling, M., Teljeur, C., Feely, J., & Bennett, K. (2010). Potentially inappropriate prescribing and cost outcomes for older people: A national population study. *British Journal of Clinical Pharmacology*, 69(5), 543-552.
- Chaplin, R., Farquharson, L., Clapp, M., & Crawford, M. (2015). Comparison of access, outcomes and experiences of older adults and working age adults in

psychological therapy. *International Journal of Geriatric Psychiatry*, 30(2), 178-184. doi:10.1002/gps.4122

Chew-Graham, C., Lovell, K., Roberts, C., Baldwin, R., Morley, M., Burns, A., . . . Burroughs, H. (2007). A randomised controlled trial to test the feasibility of a collaborative care model for the management of depression in older people. *British Journal of General Practice : The Journal of the Royal College of General Practitioners.*, 57(538), 364-370.

Cole, M., McCusker, J., Sewitch, M., Ciampi, A., & Dyachenko, A. (2008). Health services use for mental health problems by community-living seniors with depression. *International Psychogeriatrics*, 20(3), 554-570.

Crabb, R., Cavanagh, K., Proudfoot, J., Learmonth, D., Rafie, S., & Weingardt, K. (2012). Is computerized cognitive-behavioural therapy a treatment option for depression in late-life? A systematic review. *The British Journal of Clinical Psychology*, 51(4), 459-64.

Crepaz-Keay, D. (2010). Self-Management of Mental Health Problems. Mental Health Foundation, London. Retrieved from:
http://www.euro.who.int/__data/assets/pdf_file/0018/124560/E94377.pdf.pdf.

Critical Appraisal Skills Programme (2018). CASP Qualitative Assessment Checklist. [online] Retrieved from: <https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist-2018.pdf>

Dear, B., Zou, J., Titov, N., Lorian, C., Johnston, L., Spence, J., . . . Knight, R. (2012). Internet-delivered cognitive behavioural therapy for depression: A feasibility open trial for older adults. *Australian & New Zealand Journal of Psychiatry*, 47(2), 169-176.

Deci, E., & Ryan, R.M. (2015). Self-Determination Theory. 486-491.

De Vos-Kerkhof, E., Geurts, D., Wiggers, M., Moll, H., & Oostenbrink, R. (2015). Tools for 'safety netting' in common paediatric illnesses: A systematic review in emergency care. *Archives of Disease in Childhood*, 101(2), 131-139.

Donker, T., Griffiths, K. M., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: A meta-analysis. (Research article). *BMC Medicine*, 7, 79.

Dozeman, E., Van Schaik, D., Van Marwijk, H., Stek, M., Beekman, A., & Van der Horst, H. (2011). Feasibility and effectiveness of activity-scheduling as a guided self-help intervention for the prevention of depression and anxiety in

- residents in homes for the elderly: A pragmatic randomized controlled trial. *International Psychogeriatrics*, 23(6), 969-978.
- Durazo, E., Jones, M., Wallace, S., Van Arsdale, J., Aydin, M., & Stewart, C. (2011). The Health Status and Unique Health Challenges of Rural Older Adults in California. Retrieved from:
<http://healthpolicy.ucla.edu/publications/Documents/PDF/The%20Health%20Status%20and%20Unique%20Health%20Challenges%20of%20Rural%20Older%20Adults%20in%20California.pdf>
- Elsegood, K., & Powell, D. (2008). Computerised cognitive-behaviour therapy (cCBT) and older people: A pilot study to determine factors that influence willingness to engage with cCBT. *Counselling and Psychotherapy Research*, 8(3), 189-192.
- Floyd**, M., Scogin, F., McKendree-Smith, N. L., Floyd, D. L., & Rokke, P. D. (2004). Cognitive Therapy for Depression: A Comparison of Individual Psychotherapy and Bibliotherapy for Depressed Older Adults. *Behavior Modification*, 28(2), 297-318.
- Guirguis-Younger**, M., Cappeliez, P., & Younger, A. (2008). A community-based intervention for treating depression in seniors. *Canadian Journal Of Nursing Research*, 40(1), 61-79.
- Hobbs, M.J., Joubert, A.E., Mahoney, A.E.J., & Andrews, G. (2018). Treating late-life depression: Comparing the effects of internet-delivered cognitive behavior therapy across the adult lifespan. *Journal of Affective Disorders*, 226, 58-65.
- Holvast, F., Massoudi, B., Oude Voshaar, R. C., Verhaak, P. F. M., (2017). Non-pharmacological treatment for depressed older patients in primary care: A systematic review and meta-analysis. *Plos One*, 12(9), E0184666.
- Joling**, K., van Hout, H., Van't Veer-Tazelaar, P., van der Horst, H., Cuijpers, P., van de Ven, P., & ... van Marwijk, H. J. (2011). How effective is bibliotherapy for very old adults with subthreshold depression? A randomized controlled trial. *American Journal Of Geriatric Psychiatry*, 19(3), 256-265.
doi:10.1097/JGP.0b013e3181ec8859
- Jones**, S.L. (2016). A randomized controlled trial of guided internet-delivered cognitive behaviour therapy for older adults with generalized anxiety. *Journal of Anxiety Disorders*, 37, 1-9.

- Kaltenthaler, E., Parry, G., Beverley, C., & Ferriter, M. (2008). Computerised cognitive-behavioural therapy for depression: Systematic review. *British Journal Of Psychiatry*, 193(3), 181-184.
- Lamers**, S., Bohlmeijer, E., Korte, J., & Westerhof, G. (2014). The efficacy of life-review as online-guided self-help for adults: A randomized trial. *Journals of Gerontology.*, 70(1), 24-34.
- Landreville**, P. (1998). Cognitive bibliotherapy for depression in older adults with a disability. *Clinical Gerontologist*, 19(3), 69-75. Retrieved from <https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/57656645?accountid=10673>
- Landreville**, P., & Bissonnette, L. (1997). Effects of Cognitive Bibliotherapy for Depressed Older Adults with a Disability. *Clinical Gerontologist*, 17(4), 35-55.
- Landreville**, P., Gosselin, P., Grenier, S., Hudon, C., & Lorrain, D. (2016). Guided self-help for generalized anxiety disorder in older adults. *Aging & Mental Health*, 20(10), 1070-1083.
- Lee, M. (2007). *Improving Services and Support for Older People with Mental Health Problems*. The Second Report from the UK Inquiry into Mental Health and Well-Being in Later Life. Age Concern, London. Retrieved from: https://www.ageuk.org.uk/documents/en-gb/for-professionals/health-and-well-being/improving_services_and_support_for_older_people_with_mental_health_problems_executive_summary_2007_pro.pdf?dtrk=true.
- Lievesley, N. (2009). Ageism and age discrimination in mental health care in the UK. Centre for policy on aging. Retrieved from: http://www.cpa.org.uk/information/reviews/CPA-ageism_and_age_discrimination_in_mental_health_care-report.pdf.
- Mackenzie, C., Gekoski, W., & Knox, V. (2006). Age, gender, and the underutilisation of mental health services: The influence of help-seeking attitudes. *Aging & Mental Health*, 10(6), 574-582.
doi:10.1080/13607860600641200
- Mayston, R., Habtamu, K., Medhin, G., Alem, A., Fekadu, A., Habtamu, A., . . . Hanlon, C. (2017). Developing a measure of mental health service satisfaction for use in low income countries: A mixed methods study. *BMC Health Services Research*, 17(1), 183.
- McMurchie**, W., Macleod, F., Power, K., Laidlaw, K., & Prentice, N. (2013). Computerised cognitive behavioural therapy for depression and anxiety with

- older people: A pilot study to examine patient acceptability and treatment outcome. *International Journal of Geriatric Psychiatry*, 28(11), 1147-1156.
- Mental Health Foundation (2016). *Fundamental Facts about mental health*. Retrieved from: <https://www.mentalhealth.org.uk/publications/fundamental-facts-about-mental-health-2016>.
- Mental Health Commission of Canada. (2012). *Changing directions, changing lives: The mental health strategy for Canada*. Retrieved from: https://www.mentalhealthcommission.ca/sites/default/files/MHStrategy_Strategy_ENG.pdf.
- Mind (2013). *We still need to talk: a report on access to talking therapies*. Retrieved from: https://www.mind.org.uk/media/494424/we-still-need-to-talk_report.pdf.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097. doi:10.1371/journal.pmed1000097
- National Healthcare Disparities Report. 2010. Rockville, MD: USDHHS, Agency for Healthcare Research And Quality, 2011. www.ahrq.gov/qual/qdr10.htm.
- National Health Service (2018). Retrieved from: <https://www.england.nhs.uk/wp-content/uploads/2018/02/choice-in-mental-health-care-v2.pdf>
- National Institute for Clinical Excellence (2011). Retrieved from: <https://www.nice.org.uk/guidance/cg123/chapter/1-guidance#improving-access-to-services>.
- Office for National Statistics (2017). *Internet Users in the U.K.* Retrieved from: <https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/internetusers/2017>.
- O'Moore**, K. A., Newby, J. M., Andrews, G., Hunter, D. J., Bennell, K., Smith, J., Williams, A.D. (2018). Internet Cognitive-Behavioral Therapy for Depression in Older Adults With Knee Osteoarthritis: A Randomized Controlled Trial. *Arthritis Care & Research.*, 70(1), 61-70.
- Palinkas, L., Criado, V., Fuentes, D., Shepherd, S., Milian, H., Folsom, D., & Jeste, D. (2007). Unmet needs for services for older adults with mental illness: Comparison of views of different stakeholder groups. *The American Journal of Geriatric Psychiatry*, 15(6), 530-40. doi: 10.1097/JGP.0b013e3180381505

- Pepin, R., Segal, D., & Coolidge, F. (2009). Intrinsic and extrinsic barriers to mental health care among community-dwelling younger and older adults. *Aging & Mental Health*, 13(5), 769-777. doi: 10.1080/13607860902918231
- Pettigrew, S., Donovan, R., Pescud, M., Boldy, D., & Newton, R. (2010). Mature adults' attitudes to mental health service utilisation. *Australian Psychologist*, 45(2), 141-150. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/00050060903428228>
- Pinquart, M., Duberstein, P. R., & Lyness, J. M. (2007). Effects of psychotherapy and other behavioral interventions on clinically depressed older adults: A meta-analysis. *Aging & Mental Health*, 11(6), 645-657. doi:<http://dx.doi.org.ezproxy.is.ed.ac.uk/10.1080/13607860701529635>
- Raue, P., & Sirey, J. (2011). Designing personalized treatment engagement interventions for depressed older adults. *The Psychiatric Clinics of North America*, 34(2), 489-500, x.
- Royal Australian and New Zealand College of Psychiatrists. (2011). *Priority must be given to investment that improves the mental health of older Australians*. Position statement 67. Melbourne: RANZCP. Retrieved from <https://www.ranzcp.org/news-policy/policy-submissions-reports/document-library/priority-must-be-given-to-the-investment-that-impr>
- Scogin, F., Fairchild, J. K., Yon, A., Welsh, D. L., & Presnell, A. (2014).** Cognitive bibliotherapy and memory training for older adults with depressive symptoms. *Aging & Mental Health*, 18(5), 554-560.
- Scogin, F., Hamblin, D., & Beutler, L. (1987).** Bibliotherapy for depressed older adults: A self-help alternative. *Gerontologist*, 27, 383-387. Retrieved from <https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/57770853?accountid=10673>. doi:<http://dx.doi.org.ezproxy.is.ed.ac.uk/10.1080/13607863.2013.825898>
- Scogin, F., Jamison, C., & Davis, N. (1990).** Two-year follow-up of bibliotherapy for depression in older adults. *Journal of Consulting and Clinical Psychology*, 58, 665-667. Retrieved from <https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/57774528?accountid=10673>
- Scogin, F., Jamison, C., & Gochneaur, K. (1989).** Comparative efficacy of cognitive and behavioral bibliotherapy for mildly and moderately depressed older adults. *Journal of Consulting and Clinical Psychology*, 57, 403-407. Retrieved from

[https://search-proquest-](https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/57769407?accountid=10673)

[com.ezproxy.is.ed.ac.uk/docview/57769407?accountid=10673](https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/57769407?accountid=10673)

Scogin, F., Welsh, D., Hanson, A., Stump, J., & Coates, A. (2005). Evidence-Based Psychotherapies for Depression in Older Adults. *Clinical Psychology: Science and Practice*, 12(3), 222-237.

Seeley, J. R., Manitsas, T., & Gau, J. M. (2017). Feasibility study of a peer-facilitated low-intensity cognitive-behavioral intervention for mild to moderate depression and anxiety in older adults. *Aging & Mental Health*, 21(9), 968-974. doi:10.1080/13607863.2016.1186152

Shah, A. (2010). Efficacy of an audio-based cognitive behavioral therapy for older adults with depression (Order No. 3439845). Available from ProQuest Dissertations & Theses Global. (851807565). Retrieved from <https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/851807565?accountid=10673>

Singh-Manoux, A., Dugravot, A., Fournier, A., Abell, J., Ebmeier, K., Kivimäki, M., & Sabia, S. (2017). Trajectories of Depressive Symptoms Before Diagnosis of Dementia: A 28-Year Follow-up Study. *JAMA Psychiatry*, 74(7), 712-718.

Silfvernagel, K., Westlinder, A., Andersson, S., Bergman, K., Diaz Hernandez, R., Fallhagen, L., . . . Andersson, G. (2018). Individually tailored internet-based cognitive behaviour therapy for older adults with anxiety and depression: A randomised controlled trial. *Cognitive Behaviour Therapy*, 47(4), 286-300.

Slim, K., Nini, E., Forestier, D., Kwiatkowski, F., Panis, Y., & Chipponi, J. (2003). Methodological index for non-randomized studies (MINORS): Development and validation of a new instrument. *ANZ Journal of Surgery*, 73(9), 712-716.

Smith, J., Newby, J.M., Burston, N., -Murphy, M.J., Michael, S., Mackenzie, A., . . . Andrews, G. (2017). Help from home for depression: A randomised controlled trial comparing internet-delivered cognitive behaviour therapy with bibliotherapy for depression. *Internet Interventions*, 9(C), 25-37.

Spek, V., Cuijpers, P., Nyklíček, I., Smits, N., Riper, H., Keyzer, J., & Pop, V. (2008). One-year follow-up results of a randomized controlled clinical trial on internet-based cognitive behavioural therapy for subthreshold depression in people over 50 years. *Psychological Medicine*, 38(5), 635-639.

Spek, V., Nyklíček, I., Smits, N., Cuijpers, P., Riper, H., Keyzer, J., & Pop, V. (2007). Internet-based cognitive behavioural therapy for subthreshold depression in people over 50 years old: A randomized controlled clinical trial. *Psychological Medicine*, 37(12), 1797-1806.

- Stein-Shvachman, I., Karpas, D., & Werner, P. (2013). Depression Treatment Non-adherence and its Psychosocial Predictors: Differences between Young and Older Adults? *Aging And Disease*, 4(6), 329-336.
- Stickland, N., & Gentry, T. (2016). *Hidden in Plain Sight: the unmet needs of older adults*. Age U.K . Retrieved from: http://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Policy/health-and-well-being/Hidden_in_plain_sight_older_peoples_mental_health.pdf?dtrk=true
- Tanaka, S., Ishikawa, E., Mochida, A., Kawano, K., & Kobayashi, M. (2015). Effects of Early-Stage Group Psychoeducation Programme for Patients with Depression. *Occupational Therapy International*, 22(4), 195-205.
- The Australian Government (2006). Pathways of recovery: preventing further episodes of mental illness (monograph). Department of Health. Retrieved from: <http://health.gov.au/internet/publications/publishing.nsf/Content/mental-pubs-p-mono-toc~mental-pubs-p-mono-pop~mental-pubs-p-mono-pop-old>.
- The Health Foundation (2013). Measuring Patient Experience. Retrieved from: <https://www.health.org.uk/sites/default/files/MeasuringPatientExperience.pdf>.
- The Scottish Government (2016). *Mental Health in Scotland – a 10 year vision*. ISBN: 978-1-78652-371-6. Edinburgh: Crown copyright 2016. Retrieved from: https://consult.gov.scot/mental-health-unit/mental-health-in-scotland-a-10-year-vision/supporting_documents/mentalhealthstrategy.pdf.
- The Scottish Government (2018). *Mental Health Strategy 2017-2027*. 1st Progress Report. Retrieved from: <https://www.gov.scot/Resource/0054/00540827.pdf>.
- Walker**, J. G., Mackinnon, A. J., Batterham, P., Jorm, A. F., Hickie, I., McCarthy, A., . . . Christensen, H. (2010). Mental health literacy, folic acid and vitamin B12, and physical activity for the prevention of depression in older adults: Randomised controlled trial. *The British Journal of Psychiatry*, 197(1), 45-54. doi:<http://dx.doi.org.ezproxy.is.ed.ac.uk/10.1192/bjp.bp.109.075291>
- World Health Organisation (WHO: 2017). Retrieved from: <http://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>
- World Health Organisation (WHO: 2018a) Retrieved from: <http://www.who.int/ageing/en/>.
- World Health Organisation (WHO: 2018b). Retrieved from: https://www.who.int/environmental_health_emergencies/vulnerable_groups/en/

- Wuthrich, V., Frei, J., Pachana, N., & Oude Voshaar, R. (2015). Barriers to treatment for older adults seeking psychological therapy. *International Psychogeriatrics*, 27(7), 1227-1236. doi: 10.1017/S1041610215000241.
- Zautra**, A.J. (2012). Phone-based interventions with automated mindfulness and mastery messages improve the daily functioning for depressed middle-aged community residents. *Journal of Psychotherapy Integration.*, 22(3), 206-228.
- Zou**, J.B., Dear, B.F., Titov, N., Lorian, C.N., Johnston, L., Spence, J., . . . Sachdev, P. (2012). Brief internet-delivered cognitive behavioral therapy for anxiety in older adults: A feasibility trial. *Journal of Anxiety Disorders*, 26(6), 650-655

Chapter Four: An Exploration into the Relationships between Mental Health Literacy, Experiential Avoidance and Mental Health in Older Adults in a Rural Scottish Region

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Objectives: Mental health literacy (MHL) is associated with recognition of mental health needs, service utilisation and improved mental health outcomes. Little is known about the factors pertaining to older adults that perpetuate, ameliorate or confound these associations, particularly in a rural context. This study explored the level of MHL and the relationships between MHL, mental health, experiential avoidance, willingness to use mental health services and demographic variables in rural, community-dwelling older adults. **Method:** In total, 151 respondents (aged ≥ 65 , $M = 71.9$) took part in a cross-sectional survey. The MHL Scale, Acceptance in Action Questionnaire-II (experiential avoidance) and Clinical Outcomes in Routine Evaluation-10 (mental health status) were used to measure the variables of interest. **Results:** Respondents had good MHL. Half of the respondents reported being aware of local mental health services for older adults. Older age ($r(146) = -.32$, $p < .001$) and lower educational attainment ($F(1,145) = 5.34$, $p = .020$) were associated with poorer MHL in our sample. MHL was not significantly correlated with either mental health problem severity or experiential avoidance. Willingness to use mental health services was associated with lower experiential avoidance ($\rho(146) = -.266$, $p = .001$), better mental health ($\rho(146) = -.193$, $p = .018$) and better MHL ($\rho(146) = .467$, $p \leq .001$). These findings should be interpreted cautiously due to limitations of the 'willingness to use mental health services' measure. **Conclusion:** Improving rural-dwelling, older adults' MHL and their awareness of locally available services and supports may help to increase their willingness to seek mental health support.

Keywords: Older Adult, Mental Health Literacy, Mental Health, Experiential Avoidance, Rural

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Introduction

Health organizations worldwide are faced with the challenges of working within the context of an ageing population (United Nations: UN, 2015). Understanding how mental health problems develop and are maintained in older adult populations is important for improving mental health care (Andrew & Dulin, 2007). One factor known to exacerbate mental health problems is a lack of timely and appropriate mental health intervention (Mind, 2013). Although older adults experience similar rates of mental health problems to the general population (World Health Organization: WHO, 2016), they are less likely to seek (Wutrich & Frei, 2015) or access mental health services (Cole, McCusker, Sewitch, Ciampi & Dyachenko, 2008) compared to younger people (Chaplin, Farquharson, Clapp & Crawford, 2015). In addition, mental health services for older adults are relatively underdeveloped and understaffed (e.g., only a small percentage of psychologists specialise in geropsychology; Hoge, Karel, Zeiss, Algeria & Moye, 2015) despite efforts to ban age discrimination (The Equality Act, 2010; Department of Health, 2012).

In Scotland, there is a need for mental health services to find ways to better engage older adults who are experiencing mental health problems, particularly in rural areas (The Scottish Government, 2016). Rurality poses a unique set of barriers to health and healthcare. For example, rural populations in the United States are more likely to experience higher than average rates of poor health and less likely to have access to health services (National Healthcare Disparities Report, 2010). These inequalities become more pronounced in older adult populations due to barriers: to exercising (e.g., uneven terrain, absence of streetlights), nutritious diet (e.g., more expensive, limited food options in villages) and accessing services (e.g., geographical spread, lack of public transport) (Durazo et al., 2011). Deprivation and isolation are key risk factors for mental health problems across the lifespan (Scottish Borders Mental Health Strategy, 2017) and are notably relevant for rural-dwelling older adults (Duzaro et al., 2011).

Evidence suggests that both older adults and rural inhabitants are less likely to access mental health services or to have good mental health knowledge (e.g. Bartlett, Travers, Cartwright & Smith, 2006; Hauenstein, Petterson, Rovnyak, Wagner, 2006). Mental health literacy (MHL) refers to the knowledge and

understanding of mental health, which can improve prevention, early detection and management of mental health problems (Jorm et al., 1997). MHL is predicted by age and socio-economic status (SES); with older age (Farrer, Leach, Griffiths, Christensen & Jorm, 2008; Fisher & Goldney, 2003; Wetherall et al., 2009) and lower SES (Holman, 2015) associated with lower levels of MHL. A qualitative study with service-providers and older adult service-users in Australia (Fuller, Edwards, Procter & Moss, 2000) found that rural populations have historically needed to be very self-reliant and it is possible that this has affected rural people's willingness to seek professional help.

Research suggests that older adults may be more likely to use avoidance-based coping strategies (Andrew & Dulin, 2007; Blanchard-Fields, Casper-Jahnke & Camp, 1995; Bryant, 2010) perhaps as a way to cope with the higher levels of chronic pain and physical health problems generally experienced by older adults (Hayes, Luoma, Bond, Masuda & Lillis, 2006; WHO, 2016). It is possible that, in the absence of good MHL and ease of access to mental health services (Bartlett et al., 2006) older adults may be more likely to manage their distress by avoiding their emotions rather than actively seeking help. The term 'experiential avoidance' refers to a person's unwillingness to experience uncomfortable emotions, thoughts or memories, and their subsequent drive to suppress or avoid acknowledging these experiences (Hayes et al., 1996). Experiential avoidance serves to provide short-term relief from emotional distress but can exacerbate psychological problems over time (Hayes & Gifford, 1997). Indeed, older adults with mental health problems reported more thought suppression (Petkus, Gum & Wetherall, 2012) and had higher scores on a measure of experiential avoidance (Andrew & Dulin, 2007) than those without mental health problems.

The combined risks of an ageing population, inadequate service preparedness and comparatively poor mental health service utilisation by older adults, increases the likelihood of a large-scale mental health crisis in the near future. Andersen's (1995) 'health behaviour model' posits that service utilisation relies on (1) predisposing factors (e.g., demographic characteristics and health beliefs), (2) enabling factors (e.g., availability and ease of access), and (3) perceived health needs. The health needs of older adults have been clearly identified by health organisations (e.g., WHO, 2016) suggesting that the barriers to healthcare may lie in predisposing

factors, enabling factors, and perhaps in discrepancies between older adults self-perceived health needs and their needs as identified by others. Indeed, improving older adults perceptions of need may help to appropriately increase the number of older adults accessing mental health services (Byers, Arean & Yaffe, 2012).

Firstly, predisposing factors which may act as barriers to older adults accessing mental health services include: male gender (Mackenzie, Gekoski & Knox, 2006; Pettigrew, Donovan, Resceud, Boldly & Newton, 2010), less contact with people who have mental health problems (Bartlett et al., 2006), poor MHL (Kim, Rhee, Lee, Park & Sharratt, 2017) and experiential avoidance (Andrew & Dulin, 2006). Indeed, a cross-sectional survey study found that half of older adults identified '*a personal or psychological obstacle, including denial/fear and stress*' as their primary barrier to mental health service utilization (Bocker, Glasser, Nielsen & Wedidenbacher-Hoper, 2012, pp.10).

Secondly, despite the health behaviour model using the term 'enabling factors' (Andersen, 1995) the research literature often reports on barriers rather than aids to older adult service utilization. Therefore, such barriers reported in the older adult literature include financial and transport difficulties (Pepin, Segel & Coolidge, 2009), rural living (Hauenstein et al., 2006), lack of knowledge about how to access supports (Andersen, 1995), and stigma (Pettigrew et al., 2010; Segal, Coolidge, Mincic & O'Riley, 2005). Stigma relates to society's often negative, stereotyped views about people who experience mental health problems (e.g., that those with mental health problems are dangerous) and is associated with social isolation and exclusion for those experiencing it (Mental Health Foundation, 2019). Those who live in rural areas may also be at increased risk of experiencing stigma (Rost, Smith & Taylor, 1993).

Thirdly, in relation to perceived health needs, over-acceptance of mental health problems as a normal part of ageing (Burroughs et al., 2006; Pettigrew et al., 2010; Sarkisian, Lee-Henderson & Mangione, 2003; Wutrich & Frei, 2015) sometimes coined the 'understandability phenomenon' (Law, Laidlaw & Peck, 2010) may influence self-perceived need for help. Indeed, mental health problems are under-recognized and under-treated in older adults (Bryant, 2010) due in part to poor mental health problem detection by service providers (Palinkas et al., 2007).

Similarly, one's lack of knowledge about mental health (i.e., poor MHL) may also hinder self-identification of mental health problems and subsequent service utilization (Bonabi et al., 2016).

Gaps in Mental Health Literacy Research

MHL transcends all three of the health behaviour model categories outlined by Andersen (1995). Both MHL and service utilisation share a number of associated factors in common. For example, female gender (Hadjimina & Furnham, 2017), higher SES (Kim et al., 2017) and knowing people who have mental health problems (Gum et al., 2009; Piper, Bailey, Lam & Kneebone, 2018) have all been linked to higher MHL in older adults and increased service utilisation in general. Indeed, MHL has also been found to mediate the relationship between SES and depressive symptoms on service utilization (Kim et al., 2017). However, there has been limited focus on exploring factors within older adults that perpetuate, ameliorate or indeed confound the interaction between MHL and help-seeking behaviour. One such factor that will be considered in our study is the phenomenon of experiential avoidance.

Measurement of MHL has often relied on participant's assessments of vignettes. This methodology has been criticised for its emphasis on psychiatric terminology (Swami, Persaud & Furnham, 2011). A wide range of measures for MHL have been developed and used each with their own set of limitations, discussion of which is beyond the scope of this article. Of note however, are the limitations of MHL measures used in the studies reported here. For example, Kim et al. (2017) used a measure which was originally designed for use with carers of children with mental health problems, while Bonabi et al. (2016) measured depression literacy but not MHL more broadly and Hadjimina and Furnham (2017) relied on six vignettes to measure MHL. The use of vignettes may reduce the concept of 'MHL' to mental health problem recognition while failing to explore mental health attitudes (O'Connor, Casey & Clough, 2014). For the purposes of this study, use of a MHL measure that encompasses mental health problem recognition as well as attitudes towards and, beliefs about, mental health problems (e.g. O'Connor & Casey, 2015) will be utilised in order to assess a broader representation of MHL as described by Jorm et al. (1997).

In Scotland, there is a recognized need to improve the mental healthcare older adults', particularly those in rural areas, receive (The Scottish Government, 2016). Although there is a focus on improving health literacy across the lifespan in Scotland a similar plan for MHL is not mentioned (The Scottish Government, 2017). There appears to be a lack of research investigating the MHL of older adults (Kutcher, Wei & Coniglio, 2016) living in rural areas worldwide (Piper et al., 2018) and particularly outside of the United States, Canada and Australia, where the majority of the research originates. This is important given the differences in healthcare provision between the United Kingdom (U.K.), where health services are publically funded, and other countries which rely on privately funded healthcare.

Objectives

The aims of this research are twofold. Firstly, this research aims to explore the level of MHL in a rural, community-dwelling older adult sample in Scotland and compare this to older adult populations in the research literature using statistical analysis. Respondents' awareness of local mental health services and supports for older adults will also be sought. This will help establish whether community initiatives to improve MHL are warranted in this context and inform the extent to which existing findings can be generalised.

Secondly, the relationships between demographic characteristics, self-reported willingness to use mental health services, mental health, experiential avoidance, and MHL will be explored in order to identify factors associated with MHL in older adults and to make suggestions about how mental health services might better engage this population. The research hypotheses are as follows:

Hypothesis 1: The variance in both MHL and in self-reported willingness to use mental health services can be partially accounted for by demographic characteristics (age, gender, education, income, rurality) whereby older age, male gender, lower educational attainment and income, and increased rurality will be negatively associated with MHL and with willingness to use mental health services.

Hypothesis 2: MHL will be negatively correlated with both experiential avoidance and with mental health problem severity. The relationship between MHL and experiential avoidance can in part be explained by mental health problem severity

whereby those with higher mental health problem severity will have lower MHL and higher experiential avoidance.

Hypothesis 3: Higher MHL and lower experiential avoidance will be associated with higher self-reported willingness to use mental health services in older adults independent of demographic variables.

Method

Sample

In order to maximise sample size and increase the likelihood of achieving a representative sample from the community minimal inclusion and exclusion criteria were employed. Inclusion criteria: 1) older adults aged ≥ 65 years, 2) living in the Scottish Borders, 3) able to speak and understand proficient English, 4) without significant cognitive impairment and 5) able to provide written consent. The decision to require a minimum age of 65 years reflects a cut-off commonly accepted in the research literature on older adults (Shenkin, Harrison, Wilkenson, Dodds & Ioanidis, 2017).

Sample characteristics.

As shown in Table 1; of the 148 respondents included in this study, 61.5% were female, the majority identified as white (98.6%) with a mean age of 71.9 years (5.70; 65 – 91). Respondents lived in the countryside (18.9%), village (28.4%) or a town (44.6%). Educational attainment was high with 68.9% having a college or university degree. The remaining 30.4% had completed secondary school. Almost all respondents were retired (89.9%) with a small percentage still in employment (8.8%). Respondents annual incomes ranged from less than £10,000 (18.9%), £10,000 – 20,000 (43.9%) to over £20,000 (27.7%) per annum. The majority of respondents were married (66.9%). The remaining respondents were widowed (12.8%), single (12.8%), cohabitating (5.4%) or preferred not to say (2%).

One hundred and twelve respondents (75.7%) were taking medication. The majority of respondents took medication for physical health problems (87.4%) with a small percentage taking medication for mental health problems (2.7%) or both physical and mental health problems (8.1%). Twenty-seven (18.2%) respondents reported

having difficulties with their memory and two respondents reported having dementia. Approximately, one sixth of respondents (16.2%) had used mental health services at some point in their lives. Responses to the CORE-10 indicated that three quarters of respondents did not have any mental health problems while 12.1% can be described as having mild mental health problems and 12.1% can be described as having moderate-to-severe mental health problems. However, only nine respondents (6.1%) self-identified as having a mental health problem. The majority (94.6%) indicated that they would seek help from a GP, followed by a partner (37.2%), a friend (28.2%), other (10.8%) and no one (5.4%). Those who mentioned other supports suggested family ($n = 7$), therapist/counsellor ($n = 4$), mental health professional ($n = 2$), God ($n = 1$) and the internet ($n = 1$).

Table 1. Sample Characteristics

Variable	N (%)	Local Population
Age: 71.9 (5.70) 65 – 91 years	148 (100)	
65 – 74	102 (68.9)	
75 – 84	42 (28.4)	
85+	4 (2.7)	
Gender		
Female	91 (61.5)	(53.88) ^a
Male	53 (35.8)	(46.12)
Other	1 (0.7)	
Prefer not to say	2 (1.4)	
Missing	1 (0.7)	
Ethnicity		
White	146 (98.6)	(98.71) ^b
Black	1 (0.7)	(0.1)
Asian	1 (0.7)	(0.6)
Rurality		
Countryside	28 (18.9)	(18) ^b
Village	42 (28.4)	(36)
Town	66 (44.6)	(46)
Missing	12 (8.1)	
Education		
Secondary	45 (30.4)	^e
College/University	102 (68.9)	
Missing	1 (.07)	
Income		
<10,000	28 (18.9)	^e
10,000-20,000	65 (43.9)	
>20,000	41 (27.7)	

<i>Missing</i>	14 (9.5)	
Employment status		
<i>Retired</i>	133 (89.9)	
<i>Employed</i>	7 (4.7)	
<i>Other^a</i>	6 (4.1)	
Marital status		
<i>Married</i>	99 (66.9)	
<i>Cohabiting</i>	8 (5.4)	
<i>Single</i>	19 (12.8)	
<i>Widowed</i>	19 (12.8)	
<i>Prefer not to say</i>	3 (2.0)	
Medication		
<i>Yes</i>	112 (75.7)	
<i>No</i>	35 (23.6)	
<i>Prefer not to say</i>	1 (0.7)	
Medication purpose		
<i>Physical health</i>	93 (87.4)	
<i>Mental health</i>	3 (2.7)	
<i>Both</i>	6 (8.1)	
<i>Prefer not to say</i>	1 (0.9)	
<i>Don't know</i>	1 (0.9)	
Current health problems		
<i>Physical</i>	93 (62.8)	(60) ^c
<i>Mental</i>	3 (2.0)	(15) ^d
<i>Both</i>	6 (4.1)	
<i>None</i>	43 (29.1)	
<i>Prefer not to say</i>	3 (2.0)	
Mental health problem severity (CORE-10)		
<i>None</i>	113 (75.8)	
<i>Mild</i>	18 (12.1)	
<i>Moderate-Severe</i>	18 (12.1)	
Memory difficulties		
<i>Yes</i>	27 (18.2)	
<i>No</i>	121 (81.8)	
Dementia diagnosis		
<i>Yes</i>	2 (1.4)	
<i>No</i>	140 (94.6)	
<i>Missing</i>	6 (4.1)	
Referred to mental health services (MHS)		
<i>Yes</i>	23 (15.5)	
<i>No</i>	122 (82.4)	
<i>Don't know</i>	1 (0.7)	
<i>Missing</i>	1 (0.7)	

Used MHS	
Yes	24 (16.2)
No	123 (83.1)
Missing	1 (0.7)
Lack of willingness to use MHS ²	
Agree	
Neither dis/agree	5 (3.4)
Disagree	9 (6.0)
	135 (90.6)
Seek support from	
GP	141 (94.6)
Souse/partner	55 (36.9)
Friend	42 (28.2)
No-one	8 (5.4)
Other ³	16 (10.7)

Note. ¹ Semi-retired/self-employed; ² MHLS item 27 '*If I had a mental illness, I would not seek help from a mental health professional*'; ³ Family ($n = 7$), therapist/counsellor ($n = 4$), mental health professional ($n = 2$), God ($n = 1$) and the internet ($n = 1$).

^aScottish Borders Council (2012, p.12); ^bScottish Borders Health & Social Care Partnership (2015, pp. 7 & 10); ^c NHS Education for Scotland (2015 p.2); ^d WHO (2017); ^eno available comparison data.

Power Calculations

A sample size of 115 respondents for correlation analyses and 100 respondents (95 CI, margin of error = .05) for multiple regression analyses with three independent variables was estimated using G*Power (Faul, Erdfelder, Buchner & Lang, 2009). Power calculations using the tables suggested by Cohen (1992) recommend a sample size of 118 respondents in order to detect a medium effect (with an alpha level of .01) for analyses involving multiple regression with three independent variables. This increases to 147 respondents when up to eight variables are used (Cohen, 1992).

These estimated sample sizes are notably smaller than sample sizes reported in the MHL literature. Research exploring correlates and predictors of MHL in older adults has used sample sizes between 80 - 300 respondents and obtained statistically significant results (e.g., Andrew & Dulin, 2007; Fisher & Goldney, 2003; Hadjimina & Furnham, 2017; Piper et al., 2018; White & Casey, 2016). In order to proceed with caution a sample of 147 respondents was sought.

Research Context

The Scottish Borders is a rural region comprising two towns (populations circa 14,000; The Scottish Government, 2009) and several smaller towns with populations under 10,000 (New Ways Partners, 2011). 'Rural' is defined as living outside of settlements containing more than 10,000 residents (U.K. Government, 2016). Compared to other Scottish health boards, NHS Borders has one of the lowest referral rates to older adult mental health services (NHS Scotland Information Services Division, 2017). For example, the national referral rate for older adult services in the last quarter of 2016 was reported to be 1.2/1,000 while the Scottish Borders referral rate was 0.3/1,000 (NHS Scotland Information Services Division, 2017). This appears to be a trend with other rural Scottish health boards; Grampian, Highland, Islands and Ayrshire having similar referral rates of 0.3 – 0.6/1,000 (NHS Scotland Information Services Division, 2017). This is despite the Borders having a higher older adult population (30.5% aged ≥ 60) than the rest of the U.K (24% aged ≥ 60) (National Records of Scotland, 2017). However, the higher age requirement (≥ 70) for accessing older adult services in the Scottish Borders may bias comparisons.

Procedure

Pilot.

Public involvement in the development of research is both advantageous and good practice (INVOLVE, 2016). In line with recommendations by the European Research Area in Ageing (Barnes, 2007), advice on the questionnaire pack was sought from eight community-dwelling, older adults. A convenience sample of older adults (Three female, M age = 70.5, age range 65 – 77) volunteered to pilot the questionnaire pack and provide feedback.

All volunteers rated the readability of the questionnaire, font, layout and length as either 'very good' or 'good'. The ratings on the clarity and the content of the questionnaire were mixed with five volunteers rating these as 'good' and three volunteers rating these as either 'poor' or 'very poor'. Two volunteers indicated that they were not confident what was being asked in the MHL scale (MHLS) and reported that the MHLS included many terms (e.g., 'agoraphobia', 'dysthymia', 'generalised anxiety disorder') that would not be well understood by the public and/or older adults. Volunteers reported that the questionnaire took between 15 and

30 minutes to read and complete and indicated that the questionnaire was not difficult or tiring to complete. Several changes to the questionnaire were made as a result of volunteer suggestions and feedback. However, despite some feedback that the terms used in the MHLS were difficult to understand, no changes to this scale were made in order to preserve previously established validity and reliability (O'Connor & Casey, 2015).

Recruitment

Recruitment was carried out using a snowballing sampling strategy. Local organisations delivered for and/or by older adults were provided with a brief outline of the research project followed by a request to distribute questionnaires. An increasing number of older adults (e.g., 41% over the age of 75; Office for National Statistics, 2017) are using the internet. Therefore, questionnaires were available both electronically and in hardcopy in order to increase sample size and diversity. All paper questionnaires included a pre-paid envelope. Six hundred questionnaire packs were distributed across 22 weeks of active recruitment between November 2017 and November 2018. Of these, a total of 110 (18.33%) were returned. It is estimated that the electronic questionnaire reached approximately 300 potential respondents via mailing lists. Forty-one respondents completed the questionnaire online. There were no incentives for participating except for the option of receiving a summary of the findings (see Appendix D), which eleven respondents opted for.

Ethics

Ethical principles of confidentiality, informed consent, the right to withdraw and minimizing the possibility of distress were all carefully considered and applied (British Psychological Society; BPS, 2009). While it was not possible to ensure that respondents had intact cognitive functioning, the criterion that respondents must not have 'significant cognitive impairment' was stated in the information sheet. The demographic questionnaire asked respondents to indicate whether they had any difficulties with their memory or had received a dementia diagnosis as a further method of screening for cognitive impairment. Potential distress was minimized through the provision of clear information about the research topic, the types of questions asked, and details for helplines and complaints procedures. Respondents were made aware that their answers would be kept anonymous and that their signed consent forms and contact details would be filed separately and securely from their

completed questionnaire. Ethical approval from NHS Borders Research and Design and the University of Edinburgh was obtained (See Appendices E and F).

Measures

Questionnaire packs contained a plain language statement, an informed-consent form, demographic questionnaire and three standardised measures (Mental Health Literacy Scale, Clinical Outcomes in Routine Evaluation-10, Acceptance in Action-II questionnaire). The demographic questionnaire comprised tick-box items detailing age, gender, ethnicity, level of rurality (e.g., town/village/countryside), educational attainment, income range, marital status, employment, the presence of physical and/or mental health problems, medication, use of mental health services, awareness of community supports/resources and who respondents would seek support from if they had a mental health problem (See Appendix G).

Mental Health Literacy Scale (MHLS: O'Connor & Casey, 2015)

The MHLS is a 35 item measure used to address all three areas of mental health literacy (e.g., problem recognition, mental health knowledge and attitudes) as first defined by Jorm et al. (1997). Items are assessed using a range of Likert-type scales with and without midpoints (e.g., 4- and 5-point scales). In order to reduce response biases, 11 items are reverse scored. The MHLS has good internal consistency (Cronbach's $\alpha = .873$) and test-retest reliability at two week follow-up ($r = .797$). Higher scores indicate better MHL with a total possible score of 160 and a minimum possible score of 35. Although no formal cut-offs exist, previous research (White & Casey, 2016) using the MHLS has found that a community sample of older adults had a mean score ($M = 123.65$) which was comparatively lower than younger adults ($M = 130$). Furthermore, an analysis of 43 mental health professionals indicated a mean score of 145.49 ($SD = 7.19$) (O'Connor & Casey, 2015). These statistics can provide a meaningful comparison whereby scores of more than 135 arguably reflect 'high mental health literacy'.

Acceptance and Action Questionnaire (AAQ-II; Bond et al., 2011)

The AAQ-II is a 7-item measure used to assess level of psychological flexibility and experiential avoidance. It has good internal consistency ($\alpha = .84$) and test-retest reliability at 3 month follow-up ($r = .81$) (Bond et al., 2011). Respondents are asked to rate the extent to which they believe statements relating to experiential avoidance

are true of them (e.g., *'I'm afraid of my feelings'*) on a 7-point Likert type scale ranging from 'never true' to 'always true' with a midpoint of 'sometimes true'. Total scores range from 7 - 47 with higher scores indicating greater experiential avoidance. Total scores ≥ 24 are associated with clinically relevant levels of distress in adults (Bond et al., 2011).

Clinical Outcomes in Routine Evaluation (CORE-10; Barkham et al., 2013)

The CORE-10 consists of 10 statements about mental health (e.g., *'I have felt despairing or helpless'*) and is used to assess current mental health. Respondents are asked to rate each item on a 5-point Likert-type scale ranging from 'not at all = 0' to 'most or all of the time = 4'. Two items are reverse scored. The CORE-10 has been found to have good reliability ($\alpha = .90$) and validity as measured by correlations with the previously used CORE-OM across both non-clinical and clinical ($r = .92/.94$) samples (Barkham et al., 2013). The CORE-10 also has acceptable convergent validity with a range of anxiety, depression and general wellbeing measures with correlation coefficients ranging from .56 to .81. Lower scores indicate better mental health and scores can be divided into six categories ranging from healthy (0 – 9) or mild mental health problems (scores 10 – 14) to severe mental health problems (scores of 15 – 40).

Reliability

Cronbach's alphas were calculated for all three measures where data was complete. All measures had good reliability: MHLS ($\alpha = .879$), AAQ-II ($\alpha = .927$) and CORE-10 ($\alpha = .857$). One item pertaining to willingness to use mental health services was separated from the MHLS in order to analyse this variable independently. The MHLS without this item indicated good reliability ($\alpha = .874$).

Design and Statistical Analyses

A cross-sectional study design was used. Demographic data was recorded, compared to the local population where possible and summarized using descriptive statistics. Survey data was analysed using the Statistical Package for Social Sciences programme (SPSS version 24; IBM Corp, 2016). Correlation and regression analyses and analysis of variance (ANOVAs) were used to explore relationships between the variables.

Violations of normal distribution (e.g., linearity, homoscedasticity, multicollinearity) and the presence of outliers were assessed. A regression line was computed in order to check linearity and homogeneity of variance and to identify any outliers in the data. Missing data was accounted for by using the total scale mean in instances where missing data was less than 10%. An alpha of $p \leq 0.05$ was used.

Results

One hundred and fifty-one older adults completed the survey. Three respondents were excluded from the analyses; two due to incomplete, signed consent forms and one due to a high percentage (>20%) of missing data.

Missing data analyses revealed that an additional 20 respondents had some missing data below 5%. Items 4, 5 and 13 on the MHLS had a high percentage of missing data (3.4% - 7.4%). However, Little's Missing Completely at Random test was insignificant for the MHLS ($p = .637$), AAQ-II ($p = .698$) and the CORE-10 ($p = .910$) indicating that the data was missing at random. Missing values for the three, validated measures were calculated using total scale means as recommended by Barkam et al. (2013) and in the absence of formal recommendations for the other measures.

Outlier analysis was undertaken on each of the total scale mean scores. No respondent was a consistent outlier across all measures. Two respondents were identified as outliers based on their MHLS scores and one based on their AAQ-II (experiential avoidance) score but in the interest of representation were not excluded from the analyses. Data from the two respondents who reported that they did have a dementia were not significantly different from other respondents in the sample. There were no significant differences between those respondents who completed the questionnaire online and those who completed a paper copy on any of the experimental measures. However, those who completed the online questionnaire were younger ($M_{age} = 70.05$, $SD = 4.18$) and were more likely to have attended college or university ($M = 2.85$, $SD = 0.36$; where 2 = secondary school and 3 = college/university) than those who completed the paper version of the questionnaire ($M_{age} = 72.57$, $SD = 6.06$, $p = .016$) and ($M_{education} = 2.63$, $SD = 0.49$, $p = .009$).

Normal distribution

Data distribution for the three measures was explored to check assumptions of skewness and kurtosis. Of the three experimental measures, only the MHLS had a normal distribution while both the AAQ-II (experiential avoidance) and CORE-10 (mental health status) were positively skewed. The Kolmogorov-Smirnov test indicated that the data for these two measures was significantly skewed and that the kurtosis was disproportionate (i.e., z scores > 3). The single-item measure 'willingness to use mental health services' was also significantly negatively skewed. As a result, a combination of parametric and nonparametric statistical tests were employed.

Statistical analyses

An independent samples t -test was run in order to compare the mean level of MHL in our sample of rural community-dwelling older adults to the mean level of MHL in community-dwelling older adults (aged ≥ 65) reported in a similar study (White & Casey, 2016). On average, respondents in our sample ($M = 127.33$, $SD = 12.53$) and respondents in White and Casey's (2017) study ($M = 123.65$, $SD = 11.34$) had good mental health literacy. However, MHL scores for respondents in our sample were significantly higher, ($t(242) = -2.33$, $p = .021$) than those reported in White and Casey's (2016) study.

Half of the respondents either reported that they were not aware of any mental health services for older adults locally ($n = 46$) or did not comment ($n = 34$). As seen in Table 2 the remaining respondents ($n = 68$) suggested a wide range of services they deemed to be appropriate for supporting older adult mental health.

Table 2. *Local mental health services for older adults suggested by respondents*

Service	<i>n</i>¹
Dementia services (<i>e.g., Alzheimer's society, dementia café, day unit</i>)	18
General Practitioner	16
NHS	10
Mental Health Team for Older Adults	9
Mental health professionals (<i>e.g., psychiatrists, nurses, psychologists, counsellors</i>)	9
Adult Mental Health Team	7
Charities (<i>e.g., Samaritans, SAMH, Penumbra, New Horizons</i>)	6
Main hospital	5
Social services	3
Lunch clubs/support groups	3
Drop in clinics	2
Inpatient ward at local hospital	2
Other (<i>e.g., carers centre, pastoral, advocacy service, crisis team</i>)	4

Note. ¹ = number of responses across 68 respondents.

The relationships between all demographic variables and all experimental variables were assessed using parametric and non-parametric correlations and one-way ANOVAs. As shown in Tables 3 and 4, age, educational attainment, willingness to use mental health services, medication purposes, current health problems, relationship status and whether respondents had been referred to, or used, mental health services were all significantly related to at least one of the experimental variables. Given that Spearman's correlation analyses indicated that none of the demographic variables were significantly correlated with self-reported willingness to seek help no demographic variables were entered into the regression analysis as potential confounders for hypothesis 3.

Table 3.*Summary of Correlations between Experimental and Demographic variables*

Variable	MHLS	AAQ-II	CORE-10
Age	-.321***	-.129	-.018
Willingness to use MHS	.467*** ^a	-.266**	-.193*
MHLS		-.124	-.142
AAQ-II			.548**
CORE-10			

Note. $N = 148$, All correlations except for MHL x Age are Spearman's correlations.

AAQ-II = Acceptance in Action Questionnaire-II (experiential avoidance); **CORE-10** = Clinical Outcomes in Routine Evaluations (mental health status/problem severity); **MHLS** = Mental Health Literacy Scale.

^a correlated with MHLS excluding item 27 about willingness to use mental health services (MHS).

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

As shown in Table 4 those who were widowed or who preferred not to state their relationship status had higher scores on the CORE-10 (mental health problem severity) than respondents who were married, cohabitating or single. Respondents who had either mental health problems or both physical and mental health problems had higher scores on the AAQ-II (experiential avoidance) on average than did respondents who had physical health problems alone. However, these findings should be interpreted with caution as the number of participants within each health status category varied considerably and the subsamples were insufficient for appropriate statistical tests to confirm this. Finally, those who had used or been referred to mental health services in the past had higher MHL, higher experiential avoidance and poorer mental health than those who had not.

Table 4.

Summary of significant ANOVAs between Experimental and Demographic variables

Variable	<i>n</i>	<i>M (SD)</i>	<i>F</i>
MHLS			
Educational Attainment			5.341*
<i>Secondary</i>	45	123.69 (12.19)	
<i>Tertiary</i>	102	128.80 (12.40)	
Referred to MHS			4.319**
Yes	23	134.49 (12.03)	
No	122	126.21 (12.19)	
Used MHS ^b			9.014**
Yes	24	134.18 (13.06)	
No	123	125.98 (12.08)	
AAQ-II (Experiential Avoidance)			
Relationship			4.665***
<i>Married</i>	99	13.18 (7.66)	
<i>Cohabiting</i>	8	12.50 (8.97)	
<i>Widowed</i>	19	19.53 (9.73)	
<i>Single</i>	19	13.70 (6.74)	
<i>Prefer not to say</i>	3	27.00 (5.29)	
Medication Purpose ^a			4.185**
<i>Physical health problem</i>	93	15.28 (10.16)	
<i>Mental health problem</i>	3	24.67 (3.06)	
<i>Both</i>	6	23.22 (9.87)	
Referred to MHS			10.513***
Yes	23	21.32 (11.15)	
No	122	12.88 (6.71)	
Used MHS ^b			20.168***
Yes	24	20.76 (11.28)	
No	123	12.98 (6.92)	
Health status			17.141***
<i>Physical health problem</i>	93	13.14 (6.49)	
<i>Mental health problem</i>	3	37.67 (8.50)	
<i>Both</i>	6	29.00 (11.71)	
<i>None</i>	43	12.77 (6.54)	
<i>Prefer not to say</i>	3	20.00 (12.12)	
CORE-10 (Mental Health)			
Relationship			2.838*
<i>Married</i>	99	6.11 (6.04)	
<i>Cohabiting</i>	8	7.25 (9.77)	
<i>Widowed</i>	19	10.05 (8.25)	
<i>Single</i>	19	6.90 (6.64)	
<i>Prefer not to say</i>	3	16.00 (4.58)	
Medication purpose ^a			5.290***

<i>Physical health problem</i>	93	6.62 (7.95)	
<i>Mental health problem</i>	3	17.00 (12.77)	
<i>Both</i>	6	15.44 (9.77)	
Referred to MHS			15.734***
Yes	23	13.26 (9.65)	
No	122	5.57 (5.03)	
Used MHS ^b			
Yes	24	12.95 (9.78)	26.016***
No	123	5.79 (5.40)	
Health status			
<i>Physical health problem</i>	93	6.58 (5.32)	24.835***
<i>Mental health problem</i>	3	26.33 (5.51)	
<i>Both</i>	6	19.33 (10.46)	
<i>None</i>	43	4.14 (3.63)	
<i>Prefer not to say</i>	3	18.33 (11.37)	

Note. MHS = mental health services.

^a = Three respondents declined to answer or did not know; ^b past and/or present MHS use.

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

Hypothesis 1: It was predicted that education and income would have a positive relationship with MHL and willingness to use mental health services while increased age, rurality and male gender would have a negative association with these dependent experimental variables.

There was a positive, statistically significant relationship between MHL and educational attainment, ($F(1,145) = 5.34, p = .020$). As predicted, higher educational attainment was associated with higher MHL. There was a moderate, negative, statistically significant relationship between MHL and age, ($r(146) = -.32, p < .001$). As predicted, older age was associated with lower MHL. These relationships met the assumptions of linearity. There were no significant relationships between MHL and gender, income or rurality or between self-reported willingness to use mental health services and age, gender, rurality, income or education.

Hypothesis 2: The relationships between MHL, experiential avoidance and mental health problem severity were explored to test the prediction that the relationships would be negative. The CORE-10 (mental health problem severity) and AAQ-II (experiential avoidance) experimental variables were assessed for homoscedasticity

and multicollinearity. Spearman's correlations indicated that there were non-significant, negative relationships between MHL and experiential avoidance, (ρ (146) = -.12, p = .134) and between MHL and mental health problem severity, (ρ (146) = -.14, p = .086). As there was no significant correlation between MHL and experiential avoidance the hypothesis that any relationship between these two variables could in part, be explained by mental health problem status/severity was not assessed.

Hypothesis 3: It was predicted that higher MHL and lower experiential avoidance would be associated with higher self-reported willingness to use mental health services in older adults independent of demographic variables. Data did not meet the assumptions for homoscedasticity and a regression analysis was not carried out. As previously seen in Table 3 Spearman's correlations indicated that willingness to use mental health services was associated with lower experiential avoidance (ρ (146) = -.266, p = .001) and higher MHL (ρ (146) = .467, p = .001). Data also indicated that willingness to use mental health services was also associated with better mental health (ρ (146) = -.193, p = .018). However, the single-item measure of willingness to use mental health services is unreliable due to its significant negative skew and narrow range of data points.

Discussion

Older adults are less likely than younger adults to access or receive mental healthcare when they have mental health difficulties (Chaplin et al., 2015; Lievesley, 2009). Achieving equality between older and younger adults' mental healthcare is a globally recognised priority (Mental Health Commission of Canada, 2012; The Department of Health, 2012; The Equality Act, 2010; The Scottish Government, 2016, Royal Australian and New Zealand College of Psychiatrists, 2011). In Scotland, there is a need for mental health services to find ways to better engage rural-dwelling older adults (Scottish Government, 2016).

This study explored the level of mental health literacy (MHL) in a rural, Scottish, community-dwelling older adult sample in order to establish whether community initiatives to improve MHL are warranted in this context. In order to establish which characteristics are related to MHL and to self-reported willingness to seek mental health service support, the relationships between these variables and mental health,

experiential avoidance and, demographic characteristics were explored. Two of the three hypotheses were partially supported. However, these results should be interpreted with caution given the limitations of our sample's generalisability to the wider older adult population.

On average, respondents in our study had good MHL and significantly higher MHL scores than those reported in White and Casey's (2016) study on older adults in Australia. However, the respondents in their study had lower educational attainment (i.e., 18.75% primary school only, 55% further education; White & Casey, 2016) than in our study (e.g. 0% primary school only, 68.9% further education). Given that educational attainment is significantly correlated with MHL (Holman, 2015) it is possible that the higher educational attainment of respondents in our study also explains the higher MHL scores. Furthermore, given that MHL increases over time (Reavley, Too & Zhao, 2015) it is also possible that the differences observed are due to natural increases in population-level MHL over the past few years or that our sample were biased towards more educated older adults.

Similarly to previous studies on MHL (Farrer et al., 2008; Holman, 2015), older age and lower educational attainment were associated with poorer MHL in our sample. Contrary to expectation, our analyses did not reveal any associations between gender or level of rurality and MHL. Previous research, using six vignettes to measure MHL also found no association between gender and MHL in older adults (Piper et al., 2018). They concluded that gender might be less relevant to MHL in old age (Piper et al., 2018). Furthermore, it is possible that our comparisons between towns, villages and living in the countryside were not different enough to yield significant results. Indeed, the largest towns in the area are still considered to be 'small' by national standards (The Scottish Government, 2009), therefore all the respondents can be considered to be 'rural' inhabitants, the profiling of which is a considerable strength of this study.

Our predictions that MHL would be negatively correlated with experiential avoidance and with mental health problem severity did not reach statistical significance. Indeed, our data for the experiential avoidance measure was significantly, positively skewed suggesting the presence of a floor effect. The nature of the study could be viewed as a self-selection caveat whereby those who have high experiential

avoidance may be less likely to agree to take part due to their more avoidant coping styles and wanting to avoid being confronted by personal and/or emotionally salient questions about their mental health. It is possible that this contributed to the non-significant findings.

MHL has previously been linked to better ability to self-detect mental health problems and therefore to better mental health outcomes (Jorm et al., 1997). Our findings did not support this association, possibly due to limitations in our data distribution (i.e., significantly, positively skewed) and/or limitations in our measurement of mental health. For example, the CORE-10 may only capture transient mental health status and does not predict longer-term psychological functioning or well-being over time (Barkham et al., 2013). Furthermore, the single-item measure 'willingness to seek mental health service support' did not have a sufficient range or variety of responses to make accurate predictions about relationships between these variables.

The strong correlation between experiential avoidance and mental health problem severity suggests that these constructs are similar or share a common root such as poor reflective function. Previous research (Wolgast, 2014) suggests that use of the AAQ-II (experiential avoidance) alongside measures of psychological well-being increases the chances of confounded measurement. Indeed, these two measures indicated a high degree of correlation and their individual relationships with the MHL scale (MHLS) were consistent in terms of directionality.

Our findings relate to the three constructs in Andersen's (1995) health behaviour model of service utilization (i.e., demographic characteristics and health beliefs; perceived availability of mental health services; perceived health needs). Firstly, in terms of demographic characteristics and health beliefs our findings indicated that better mental health, lower experiential avoidance and higher MHL were associated with self-reported willingness to use mental health services while, poorer mental health, higher experiential avoidance and higher MHL were associated with actual service use in an educated sample of older adults. This finding is interesting because it highlights contrasting relationships between both experiential avoidance and mental health and, past and prospective mental health service utilisation. Segal et al. (2005) found that adults both reported high levels of willingness to seek mental

health support. However, it is unclear whether such self-reports lead to actual behaviour, especially during times of poor mental health. Indeed, research suggests that people tend to predict that they will engage in more, personally desirable, future behaviours than what happens in actuality (Poon, Koehler, & Buehler, 2014). As previously highlighted, these results should be interpreted with caution given the limitations in the measurement of self-reported willingness to use mental health services.

None of the demographic variables in our study were associated with self-reported willingness to seek mental health support. This was unexpected given previous findings indicating that female gender and higher education predicted willingness to seek psychological help (Mackenzie et al., 2006). However, because this variable was significantly, negatively skewed it is possible that the responses were not heterogeneous enough to uncover any differences between level of willingness to seek mental health service support and demographic characteristics. Indeed, a ceiling effect may have been present given that the vast majority of respondents indicated that they would be willing to seek mental health support to varying degrees (e.g., 96.6%).

Secondly, in relation to the perceived availability of mental health services, as described in Andersen (1995), only half of the respondents in our study were able to identify a locally available mental health support for older adults. Similar to Pettigrew et al's (2010) findings, few respondents identified specialist mental health services or mental health professionals while most made reference to more generic health services (e.g., general practitioners; GPs). The majority of respondents reported that they would seek help from their GP in the first instance, should they have concerns about their mental health. This may be a reflection of the stepped healthcare model in the U.K., where access to mental health services usually requires a referral from primary care (Mind, 2019).

Thirdly, in relation to perceived health needs (Andersen, 1995) results from the CORE-10 (mental health status/problem severity) indicated that 24.2% of the respondents had some level of mental health difficulty. However, only 9% of respondents reported that they had a mental health problem and only 16% had accessed mental health services. Recognition of mental health problems is key for

triggering help-seeking behaviour (Bonabi et al., 2016; Schomerus, Matschinger, & Angermeyer, 2009). In line with concerns raised by Byers et al (2012) our findings suggest that some respondents who might benefit from mental health services have not accessed them and that some respondents who experience mental health difficulties do not self-identify as having a mental health problem. Older adults with poor MHL tend to view their mental health symptoms as part of physical disability (Tomczyk et al., 2018). It is possible that a similar effect was present in our sample.

Implications

Given that older adults in our sample and in other studies (Bocker et al., 2012; White & Casey, 2016) are most likely to visit their GP when they have concerns about their mental health, primary care settings such as health centres may provide the most optimal location for reaching rural, community-dwelling older adults in the U.K. The provision of specialist mental health education, consultation and support to GPs may be beneficial in order to improve both mental health problem recognition (Chaplin et al., 2015; Tomczyk et al., 2018) and referral pathways (Cole et al., 2006) for older adults.

Increasing client involvement with the decision-making process is important for ensuring equitable mental healthcare for older adults (Raue & Sirey, 2011). In order to also better engage older adults in their mental healthcare, the provision of mental health information for older adults will also be important (Chaplin et al., 2015; Mackenzie et al., 2006). Despite our sample being more educated than the local population, approximately one third to half of our sample did not know of any services to support them should they have concerns about their mental health. Therefore, more information about local mental health services and supports and their remits may be helpful. Indeed, older adults were more likely to use mental health services when there was consistency between their expectations and their experiences of such services (Pettigrew et al., 2010). Similarly, a qualitative study indicated that rural-dwelling adults were unlikely to seek mental health support because they perceived that mental health services were for those who had severe mental health difficulties, were dangerous and needed to be detained (Fuller et al., 2000).

Community initiatives should strive to increase the awareness of mental health problems in later life, across generations so that families can also help to identify and support their older adult relatives (White & Casey, 2016). While children and adults receive MHL interventions at school or work respectively (Kutcher et al., 2016) a similar format for providing such interventions for older adults is less obvious. Government initiatives to improve MHL lag behind those of health literacy. For example, while the NHS has a website specifically designed for providing information on common physical health concerns (The Scottish Government, 2017) an equivalent for mental health concerns has not yet been made available (The Scottish Government, 2016). However, given that internet availability and infrastructure in rural areas can be problematic (e.g., Durazo et al., 2011) the provision of information over the radio may be a more accessible and cost-effective method for providing information about mental health to older adults (e.g., Travers & Bartlett, 2011) including those who may have lower educational attainment.

Study Strengths and Limitations

This is the first study, to our knowledge, that investigates these constructs within a rural, older adult sample. The use of reliable and valid measures of mental health and MHL, comprehensive demographic data and adequate sample size of rural respondents are strengths of this study, particularly given the heightened levels of stigma surrounding mental health for rural inhabitants (Rost et al., 1993) and the possible impacts this might have on willingness to participate in research on mental health. However, our one-item measure of willingness to seek mental health service supports indicated the presence of a ceiling effect. Use of a valid and reliable multi-item measure of willingness to seek help (e.g., the Attitudes Toward Seeking Professional Psychological Help Scale; Fischer & Farina, 1995) may have helped to mitigate these limitations.

Based on the few local, population statistics available our sample was representative in terms of ethnicity, rurality (town/village/countryside) and gender divide in those aged ≥ 65 (i.e., higher proportion of females than males). However, our sample had a higher ratio of females to males and higher educational attainment than local population averages. In relation to educational attainment, respondent's comments on the questionnaire indicated a nuanced level of knowledge, with some respondents pointing out that the questions pertaining to their attitudes about others

with mental health problems would depend on what type of mental health problem; e.g., *'it depends on the mental illness. There is so much variety between and within a diagnosis'* (female, aged 80) and *'some of my answers would depend on what degree of mental illness the person suffered from'* (female, aged 74). Similar to Bartlett et al's (2006) study, response bias is a distinct possibility whereby those who had good mental health knowledge and/or were interested in mental health were more likely to participate than those without such knowledge.

Deprivation has been linked to poor service utilization in rural areas (Duzaro et al., 2011). Although respondents in our sample were highly educated, we cannot comment on levels of deprivation experienced by respondents. Characteristics typically associated with measurement of deprivation (e.g. income, employment opportunities) may not provide an accurate portrayal for those living in rural areas where commodities are often more expensive and more difficult to access (Burke & Jones, 2018). Although we did explore rurality, our study may have been improved by further exploration into whether or not respondents had access to their own transport (e.g., car) because that would have helped to determine relative isolation. Furthermore, it was not possible to determine the length of time respondents in our study had been living in the Scottish Borders. Therefore, some respondents may have retired to the area more recently. Asking respondents how long they had lived in the Scottish Borders may have helped to determine whether length of stay in a rural location is associated with well-being and MHL.

Despite several characteristics of our sample suggesting some representativeness to the wider older adult population our findings are not generalisable to older adults who have cognitive impairments, those who may be less educated or those who are in residential accommodation. Furthermore, the identified associations in our study rely on correlation analyses and it is not possible to infer causality.

Conclusion

In conclusion, rural-dwelling older adults with at least secondary school education, who have higher MHL, better mental health and lower experiential avoidance are generally more likely to report being willing to access mental health supports if needed. Our findings suggest that some respondents who might benefit from mental health services have not accessed them and that some respondents who

experience mental health difficulties do not self-identify as having a mental health problem. Although the older adults in our study had high levels of educational attainment and good MHL as measured by the MHL scale, few of them were aware of local mental health services and supports for older adults experiencing mental health problems.

We propose that improving the MHL of older adults, particularly in relation to the availability and remit of different mental health services and supports, will help to empower them to make more informed decisions about their mental healthcare. Our research findings indicate that MHL interventions might be particularly beneficial for older adults who have lower educational attainment as this demographic characteristic was associated with lower MHL in our study. We also propose that primary care settings such as health centres may be the best location for providing mental health information to older adults. This could be done through specialist education for GPs and/or information leaflets.

References

- Andersen, R. (1995). Revisiting the Behavioral Model and Access to Medical Care: Does it Matter? *Journal of Health and Social Behavior*, 36(1), 1-10.
- Andrew, D., & Dulin, P. (2007). The relationship between self-reported health and mental health problems among older adults in New Zealand: Experiential avoidance as a moderator. *Aging & Mental Health*, 11(5), 596-603.
doi:10.1080/13607860601086587
- Barnes, M. (2007). *Good practice guide Involving Older People in Research: examples, purposes and good practice*. European Research Area in Aging. Retrieved from:
http://eprints.brighton.ac.uk/5365/1/Good_Practice_Guide_Involving_older_people_in_research.pdf
- Barkham, M., Bewick, B., Mullin, T., Gilbody, S., Connell, J., Cahill, J., . . . Evans, C. (2013). The CORE-10: A short measure of psychological distress for routine use in the psychological therapies. *Counselling and Psychotherapy Research*, 13(1), 3-13. doi: 10.1080/14733145.2012.729069
- Bartlett, H., Travers, C., Cartwright, C., & Smith, N. (2006). Mental health literacy in rural Queensland: Results of a community survey. *Australian and New Zealand Journal of Psychiatry*, 2006, Vol.40 (9), 783-789. doi:10.1080/j.1440-1614.2006.01884.x
- Blanchard-Fields, F., Casper-Jahnke, H., & Camp, C. (1995). Age differences in problem solving style: The role of emotional salience. *Psychology and Ageing*, 10, 173-180.
- Bocker, E., Glasser, M., Nielsen, K., & Weidenbacher-Hoper, V. (2012). Rural older adults' mental health: Status and challenges in care delivery. *Rural And Remote Health*, 12(4).
- Bonabi, H., Müller, M., Ajdacic-Gross, V., Eisele, J., Rodgers, S., Seifritz, E., . . . Rüsch, N. (2016). Mental Health Literacy, Attitudes to Help Seeking, and Perceived Need as Predictors of Mental Health Service Use: A Longitudinal Study. *The Journal of Nervous and Mental Disease*, 204(4), 321-324.
doi:10.1097/NMD.0000000000000488
- Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., Waltz, T., & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire - II: A revised measure of psychological

- flexibility and experiential avoidance. *Behavior Therapy*, 42, 676-688. doi: 10.1016/j.beth.2011.03.007
- British Psychological Society (BPS: 2010). *Code of Human Research Ethics*. Retrieved from: http://www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf
- Bryant, C. (2010). Anxiety and depression in old age: challenges in recognition and diagnosis. *International Psychogeriatrics*, 22(4), 511-513
- Burke, A., & Jones, A. (2018). The development of an index of rural deprivation: A case study of Norfolk, England. *Social Science & Medicine*, Social Science & Medicine.
- Burroughs, H., Lovell, K., Morley, M., Baldwin, R., Burns, A., & Chew-Graham, C. (2006). Justifiable depression: How primary care professionals and patients view late-life depression? a qualitative study. *Family Practice*, 23(3), 369-377. doi:10.1093/fampra/cmi115
- Byers, A., Arean, P., & Yaffe, K. (2012). Low Use of Mental Health Services Among Older Americans With Mood and Anxiety Disorders. *Psychiatric Services*, 63(1), 66-72.
- Chaplin, R., Farquharson, L., Clapp, M., & Crawford, M. (2015). Comparison of access, outcomes and experiences of older adults and working age adults in psychological therapy. *International Journal of Geriatric Psychiatry*, 30(2), 178-184. doi:10.1002/gps.4122
- Cohen, J. (1992). 'A power primer'. *Psychological Bulletin*, 112 (1), 155-159.
- Cole, M. G., McCusker, J., Sewitch, M., Ciampi, A., & Dyachenko, A. "Health Services Use for Mental Health Problems by Community-living Seniors with Depression." *International Psychogeriatrics* 20.3 (2008): 554-70. Web.
- Department of Health. (2012). *Implementing a ban on age discrimination in the NHS-making effective, appropriate decisions*. London. Department of Health. Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/212944/ban-on-age-discrimination.pdf
- Durazo, E., Jones, M., Wallace, S., Van Arsdale, J., Aydin, M., & Stewart, C. (2011). The Health Status and Unique Health Challenges of Rural Older Adults in California. *Health Policy Brief*. Retrieved from: <http://healthpolicy.ucla.edu/publications/Documents/PDF/The%20Health%20St>

atus%20and%20Unique%20Health%20Challenges%20of%20Rural%20Older
%20Adults%20in%20California.pdf

- Farrer, L., Leach, L., Griffiths, K. M., Christensen, H., & Jorm, A. F. (2008). Age differences in mental health literacy. *BMC Public Health*, 8, 125.
doi:10.1186/1471-2458-8-125
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.
- Fischer, E., & Farina, A. (1995). Attitudes toward seeking psychological professional help: A shortened form and considerations for research. *Journal of College Student Development*, 36, 368-373
- Fisher, L., & Goldney, R. (2003). Differences in community mental health literacy in older and younger Australians. *International Journal of Geriatric Psychiatry*, 18(1), 33-40. doi:10.1002/gps.769
- Fuller, J., Edwards, J., Procter, N., & Moss, J. (2000). How Definition of Mental Health Problems can Influence Help Seeking in Rural and Remote Communities. *Australian Journal of Rural Health*, 8(3), 148-153.
doi:10.1046/j.1440-1584.2000.00303.x
- Gum, A., Petkus, A., Mcdougal, S., Present, M., King-Kallimanis, B., & Schonfeld, L. (2009). Behavioral health needs and problem recognition by older adults receiving home-based aging services. *International Journal Of Geriatric Psychiatry*, 24(4), 400-408.
- Hadjimina, E., & Furnham, A. (2017). Influence of age and gender on mental health literacy of anxiety disorders. *Psychiatry Research*, 251, 8-13.
doi:10.1016/j.psychres.2017.01.089
- Hauenstein, E. J., Petterson, S., Rovnyak, V., & Wagner, D. (2006). Rurality, gender, and mental health treatment. *Family and Community Health*, 29(3), 169-185.
- Hayes, S., & Gifford, E. (1997). The Trouble with Language: Experiential Avoidance, Rules, and the Nature of Verbal Events. *Psychological Science*, 8(3), 170-173.
- Hayes, S. C., Luoma, J. B., Bond, F.W., Masuda, A., & Lillis, J. (2006). Acceptance and Commitment Therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, 44(1), 1-25. doi:10.1016/j.brat.2005.06.006
- Hayes, S., Wilson, K., Gifford, E., Follette, V., Strosahl, K., Beutler, Larry E., & Follette, William C. (1996). Experiential Avoidance and Behavioral Disorders:

- A Functional Dimensional Approach to Diagnosis and Treatment. *Journal of Consulting and Clinical Psychology*, 64(6), 1152-1168.
- Hoge, M., Karel, M., Zeiss, A., Alegria, M., & Moye, J. (2015). Strengthening Psychology's Workforce for Older Adults. *American Psychologist*, 70(3), 265-278.
- Holman, D. (2015). Exploring the relationship between social class, mental illness stigma and mental health literacy using British national survey data. *Health*, 19(4), 413-429. doi:10.1177/1363459314554316
- IBM Corp. (2016). IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY: IBM Corp.
- INVOLVE (2016). *The impact of public involvement on the ethical aspects of research*. NHS Health Research Authority. Retrieved from: <http://www.hra.nhs.uk/documents/2016/05/impact-public-involvement-ethical-aspects-research-updated-2016.pdf>
- Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B., Pollitt, P. (1997). Mental health literacy: A survey of the public's ability to recognize mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia*, 166(4): 182–6. Retrieved from <https://www.mja.com.au/journal/1997/166/4/mental-health-literacy-survey-publics-ability-recognise-mental-disorders-and>
- Kim, Y., Rhee, T., Lee, H., Park, B., & Sharratt, M. (2017). Mental health literacy as a mediator in use of mental health services among older Korean adults. *International Psychogeriatrics*, 29(2), 269-279.
- Kutcher, S., Wei, Y., & Coniglio, C. (2016). Mental Health Literacy: Past, Present, and Future. *The Canadian Journal of Psychiatry*, 61(3), 154-158.
- Law, J., Laidlaw, K., & Peck, D. (2010). Is Depression Viewed as an Inevitable Consequence of Age? The "Understandability Phenomenon" in Older People. *Clinical Gerontologist*, 33(3), 194-209. doi: /abs/10.1080/07317111003773627
- Lievesley, N. (2009). *Ageism and age discrimination in mental health care in the UK*. Centre for policy on aging. Retrieved from: http://www.cpa.org.uk/information/reviews/CPA-ageism_and_age_discrimination_in_mental_health_care-report.pdf.
- Mackenzie, C., Gekoski, W., & Knox, V. (2006). Age, gender, and the underutilisation of mental health services: The influence of help-seeking

- attitudes. *Aging & Mental Health*, 10(6), 574-582.
doi:10.1080/13607860600641200
- Mental Health Commission of Canada. (2012). *Changing directions, changing lives: The mental health strategy for Canada*. Retrieved from:
https://www.mentalhealthcommission.ca/sites/default/files/MHStrategy_Strategy_ENG.pdf.
- Mental Health Foundation (2019). *Stigma and Discrimination*. Retrieved from:
<https://www.mentalhealth.org.uk/a-to-z/s/stigma-and-discrimination>
- Mind (2013). *We still need to talk: a report on access to talking therapies*. Retrieved from: https://www.mind.org.uk/media/494424/we-still-need-to-talk_report.pdf
- Mind (2019). Stepped Care Model. Retrieved from: <https://wellbeinginfo.org/self-help/mental-health/stepped-care/>
- National Healthcare Disparities Report. (2010). Rockville, MD : USDHHS, Agency for Healthcare Research And Quality, 2011. www.ahrq.gov/qual/qdrdr10.htm .
- National Records of Scotland (2017). Retrieved from:
<https://www.nrscotland.gov.uk/files/statistics/council-area-data-sheets/scottish-borders-factsheet.pdf>
- New Ways Partners. (2011). *Population of borders towns and villages*. Retrieved from: <http://www.ourscottishborders.com/live/towns/populations>
- NHS Education for Scotland (2015). *Psychological Interventions in Physical Health Care: The need and the Economic Case*. Retrieved from:
https://www.nes.scot.nhs.uk/media/3967641/psychological_interventions_in_physical_health_care_the_need_and_the_economic_case.pdf
- NHS Scotland: Information Services Division (2017). *Psychological Therapies Waiting Times*. Retrieved from: <http://www.isdscotland.org/Health-Topics/Waiting-Times/Publications/2017-03-07/2017-03-07-WT-PsychTherapies-Report.pdf>
- O'Connor, M., & Casey, L. (2015). The Mental Health Literacy Scale (MHLS): A new scale-based measure of mental health literacy. *Psychiatry Research*, 229(1-2), 511-516. doi: 10.1016/j.psychres.2015.05.064.
- O'Connor, M., Casey, L., & Clough, B. (2014). Measuring mental health literacy a review of scale-based measures. *Journal of Mental Health*, 23(4), 197-204. doi: 10.3109/09638237.2014.910646.

- Office for National Statistics. (2017). *Internet Users in the U.K.* Retrieved from:
<https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/internetusers/2017>
- Pepin, R., Segal, D., & Coolidge, F. (2009). Intrinsic and extrinsic barriers to mental health care among community-dwelling younger and older adults. *Aging & Mental Health*, 13(5), 769-777. doi: 10.1080/13607860902918231.
- Petkus, A., Gum, A., & Wetherell, J. (2012). Thought suppression is associated with psychological distress in homebound older adults. *Depression and Anxiety*, 29(3), 219-225.
- Pettigrew, S., Donovan, R., Pescud, M., Boldy, D., & Newton, R. (2010). Mature adults' attitudes to mental health service utilisation. *Australian Psychologist*, 45(2), 141-150. Retrieved from
<http://www.tandfonline.com/doi/abs/10.1080/00050060903428228>
- Piper, S.E., Bailey, P.E., Lam, L.T., & Kneebone, I.I. (2018). Predictors of mental health literacy in older people. *Archives of Gerontology and Geriatrics*, 79, 52-56.
- Poon, C. S. K., Koehler, D. J., & Buehler, R. (2014). On the Psychology of Self-prediction: Consideration of Situational Barriers to Intended Actions. *Judgment and Decision Making*, 9(3), 207-225.
- Raue, P., & Sirey, J. (2011). Designing personalized treatment engagement interventions for depressed older adults. *The Psychiatric Clinics of North America*, 34(2), 489-500, x.
- Reavley, N., Too, T., & Zhao, M. (2015). National Surveys of Mental Health Literacy and Stigma and National Survey of Discrimination and Positive Treatment. Retrieved from:
<https://nswmentalhealthcommission.com.au/sites/default/files/Report%20-%20National%20Surveys%20of%20Mental%20Health%20Literacy%2C%20Stigma%20and%20Discrimination%20-%20NSW%20findings.pdf>
- Rost, K., Smith, G.R., & Taylor, J.L. (1993). Rural-urban differences in stigma and the use of care for depressive disorders. *The Journal of Rural Health*, (1), 57-62.
- Royal Australian and New Zealand College of Psychiatrists. (2011). Priority must be given to investment that improves the mental health of older Australians. Position statement 67. Melbourne: RANZCP. Retrieved from:

- <https://www.ranzcp.org/news-policy/policy-submissions-reports/document-library/priority-must-be-given-to-the-investment-that-impr>
- Sarkisian, C., Lee-Henderson, M., & Mangione, C. (2003). Do Depressed Older Adults Who Attribute Depression to "Old Age" Believe It Is Important to Seek Care? *Journal of General Internal Medicine*, 18(12), 1001-1005.
doi:10.1111/j.1525-1497.2003.30215.x
- Schomerus, G., Matschinger, H., & Angermeyer, M. (2009). Attitudes that determine willingness to seek psychiatric help for depression: A representative population survey applying the Theory of Planned Behaviour. *Psychological Medicine*, 39(11), 1855-1865.
- Scottish Borders Council (2012). *Equality Data Profile*. Retrieved from:
https://www.scotborders.gov.uk/download/downloads/id/328/data_profile_2012_update.pdf
- Scottish Borders Health & Social Care Partnership (2015). *Working Together for the Best Possible Health and Wellbeing in our Communities*. Retrieved from:
http://www.nhsborders.scot.nhs.uk/media/382172/Facts_and_Stats_document_September_2015.pdf
- Scottish Borders Mental Health Strategy (2017). Retrieved from:
<http://www.nhsborders.scot.nhs.uk/media/521799/mentalhealthstrategy17.pdf>
- Segal, D., Coolidge, F., Mincic, M., & O'Riley, A. (2005). Beliefs about mental illness and willingness to seek help: A cross-sectional study. *Aging & Mental Health*, 9(4), 363-367.
- Shenkin, S., Harrison, J., Wilkinson, T., Dodds, R., & Ioannidis, J. (2017). Systematic reviews: Guidance relevant for studies of older people. *Age and Ageing*, 46(5), 722-728.
- Swami, V., Persaud, R., & Furnham, A. The recognition of mental health disorders and its association with psychiatric skepticism, knowledge of psychiatry, and the big five personality factors: an investigation using the overclaiming technique. *Social Psychiatry Epidemiology*, 46, 181–9. doi:10.1007/s00127-010-0193-3.
- The Equality Act. (2010). Retrieved from:
https://www.legislation.gov.uk/ukpga/2010/15/pdfs/ukpga_20100015_en.pdf
- The Scottish Government (2009). *Use and Understanding of the Scottish Government Urban Rural Classification*. Retrieved from:
<https://www2.gov.scot/Publications/2009/08/07115535/14>

- The Scottish Government (2016). *Mental Health in Scotland – a 10 year vision*. ISBN: 978-1-78652-371-6. Edinburgh: Crown copyright 2016. Retrieved from: https://consult.scotland.gov.uk/mental-health-unit/mental-health-in-scotland-a-10-year-vision/supporting_documents/mental%20health%20in%20scotland%2010%20year%20vision.pdf
- The Scottish Government (2017). *Making it Easier: A Health Literacy Action Plan*. Retrieved from: <https://www.gov.scot/binaries/content/documents/govscot/publications/publication/2017/11/making-easier-health-literacy-action-plan-scotland-2017-2025/documents/00528139-pdf/00528139-pdf/govscot:document/>
- Tomczyk, S., Muehlan, H., Freitag, S., Stolzenburg, S., Schomerus, G., & Schmidt, S. (2018). Is knowledge "half the battle"? The role of depression literacy in help-seeking among a non-clinical sample of adults with currently untreated mental health problems. *Journal of Affective Disorders*, 238, 289-296.
- Travers, C., & Bartlett, H. (2011). Silver Memories : Implementation and evaluation of a unique radio program for older people. *Aging & Mental Health*, 15(2), 169-177.
- U.K. Government (2016). *2011 rural urban classification*. Retrieved from: <https://www.gov.uk/government/statistics/2011-rural-urban-classification>
- United Nations (2015): United Nations Department of Economic and Social Affairs/Population Division World Population Prospects: *The 2015 Revision, Key Findings and Advance Tables*. New York. Retrieved from: https://esa.un.org/unpd/wpp/publications/files/key_findings_wpp_2015.pdf
- Wetherell, J. L., Petkus, A. J., McChesney, K. B., Stein, M. H., Judd, P. D., Rockwell, E. L., . . . Patterson, T. (2009). Older Adults Are Less Accurate Than Younger Adults at Identifying Symptoms of Anxiety and Depression. *The Journal of Nervous and Mental Disease*, 197(8), 623-626. doi: 10.1097/NMD.0b013e3181b0c081
- White, M., & Casey, L. (2016). Helping older adults to help themselves: The role of mental health literacy in family members. *Aging & Mental Health*, 1-9. doi: <http://dx.doi.org/10.1080/13607863.2016.1206513>
- World Health Organization: WHO (2016). *Multisectoral action for a life course approach to healthy ageing*: draft global strategy and plan of action on ageing

and health. Geneva. Available from:

http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_17-en.pdf

Wolgast, M. (2014). "What Does the Acceptance and Action Questionnaire (AAQ-II) Really Measure?" *Behavior Therapy* 45.6 (2014): 831-39. Web.

Wuthrich, V., Frei, J., Pachana, N., & Oude Voshaar, R. (2015). Barriers to treatment for older adults seeking psychological therapy. *International Psychogeriatrics.*, 27(7), 1227-1236. doi: 10.1017/S1041610215000241.

Thesis Reference List

- Abramowitz, J.S., Fabricant, Taylor, S., Deacon, B.J., McKay, D., & Storch, E.A. (2014). The relevance of analogue studies for understanding obsessions and compulsions. *Clinical Psychology Review*, 34(3), 206-217.
- American Psychological Association: APA (2017). *Mental and Behavioral Health in Older Americans*. Retrieved from:
<http://www.apa.org/about/gr/issues/aging/mental-health.aspx>
- Andersen, R. (1995). Revisiting the Behavioral Model and Access to Medical Care: Does it Matter? *Journal of Health and Social Behavior*, 36(1), 1-10.
- Andrew, D., & Dulin, P. (2007). The relationship between self-reported health and mental health problems among older adults in New Zealand: Experiential avoidance as a moderator. *Aging & Mental Health*, 11(5), 596-603.
doi:10.1080/13607860601086587
- Andrews, G., Cuijpers, P., Craske, M.G., Mcevoy, P., & Titov, N. (2010). Computer therapy for the anxiety and depressive disorders is effective, acceptable and practical health care: A meta-analysis. *PLoS ONE*, 5(10), E13196.
- Bandura, A. (1988). Self-efficacy conception of anxiety. *Anxiety Research*, 1, 77-98.
- Barkham, M., Bewick, B., Mullin, T., Gilbody, S., Connell, J., Cahill, J., . . . Evans, C. (2013). The CORE-10: A short measure of psychological distress for routine use in the psychological therapies. *Counselling and Psychotherapy Research*, 13(1), 3-13. doi: 10.1080/14733145.2012.729069
- Barnes, M. (2007). Good practice guide Involving Older People in Research: examples, purposes and good practice. *European Research Area in Aging*. Retrieved from:
http://eprints.brighton.ac.uk/5365/1/Good_Practice_Guide_Involving_older_people_in_research.pdf
- Bartlett, H., Travers, C., Cartwright, C., & Smith, N. (2006). Mental health literacy in rural Queensland: Results of a community survey. *Australian and New Zealand Journal of Psychiatry*, 2006, Vol.40 (9), 783-789. doi:10.1080/j.1440-1614.2006.01884.x
- Bichescu, D., Neuner, F., Schauer, M., & Elbert, T. (2007). Narrative exposure therapy for political imprisonment-related chronic posttraumatic stress disorder and depression. *Behaviour Research and Therapy*, 45(9), 2212.
- Blanchard-Fields, F., Casper-Jahnke, H., & Camp, C. (1995). Age differences in problem solving style: The role of emotional salience. *Psychology and Ageing*, 10, 173-180.
- Bocker, E., Glasser, M., Nielsen, K., & Weidenbacher-Hoper, V. (2012). Rural older adults' mental health: Status and challenges in care delivery. *Rural And Remote Health*, 12(4).
- Bonabi, H., Müller, M., Ajdacic-Gross, V., Eisele, J., Rodgers, S., Seifritz, E., . . . Rüsch, N. (2016). Mental Health Literacy, Attitudes to Help Seeking, and Perceived Need as Predictors of Mental Health Service Use: A Longitudinal Study. *The Journal of Nervous and Mental Disease*, 204(4), 321-324.
doi:10.1097/NMD.0000000000000488

- Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. M., Guenole, N., Orcutt, H. K., Waltz, T., & Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire - II: A revised measure of psychological flexibility and experiential avoidance. *Behavior Therapy*, 42, 676-688. doi: 10.1016/j.beth.2011.03.007
- British Psychological Society (2010). *Code of Human Research Ethics*. Retrieved from: http://www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf
- British Psychological Society (2011). *Generalised Anxiety Disorder in Adults. Management in Primary, Secondary and Community Care*. National Collaborating Centre for Mental Health (UK). ISBN-13: 978-1-904671-42-8. Retrieved from: <https://www.ncbi.nlm.nih.gov/books/NBK83456/>
- Bryant, C. (2010). Anxiety and depression in old age: challenges in recognition and diagnosis. *International Psychogeriatrics*, 22(4), 511-513.
- Burke, A., & Jones, A. (2018). The development of an index of rural deprivation: A case study of Norfolk, England. *Social Science & Medicine*, Social Science & Medicine.
- Burroughs, H., Lovell, K., Morley, M., Baldwin, R., Burns, A., & Chew-Graham, C. (2006). Justifiable depression: How primary care professionals and patients view late-life depression? a qualitative study. *Family Practice*, 23(3), 369-377. doi:10.1093/fampra/cmi115
- Byers, A., Arean, P., & Yaffe, K. (2012). Low Use of Mental Health Services Among Older Americans With Mood and Anxiety Disorders. *Psychiatric Services*, 63(1), 66-72.
- Cahir, C., Fahey, T., Teeling, M., Teljeur, C., Feely, J., & Bennett, K. (2010). Potentially inappropriate prescribing and cost outcomes for older people: A national population study. *British Journal of Clinical Pharmacology*, 69(5), 543-552.
- Chaplin, R., Farquharson, L., Clapp, M., & Crawford, M. (2015). Comparison of access, outcomes and experiences of older adults and working age adults in psychological therapy. *International Journal of Geriatric Psychiatry*, 30(2), 178-184. doi:10.1002/gps.4122
- Chew-Graham, C., Lovell, K., Roberts, C., Baldwin, R., Morley, M., Burns, A., . . . Burroughs, H. (2007). A randomised controlled trial to test the feasibility of a collaborative care model for the management of depression in older people. *British Journal of General Practice: The Journal of the Royal College of General Practitioners*, 57(538), 364-370.
- Cohen, J. (1992). 'A power primer'. *Psychological Bulletin*, 112 (1), 155-159.
- Cole, M., McCusker, J., Sewitch, M., Ciampi, A., & Dyachenko, A. (2008). Health services use for mental health problems by community-living seniors with depression. *International Psychogeriatrics*, 20(3), 554-570.
- Crabb, R., Cavanagh, K., Proudfoot, J., Learmonth, D., Rafie, S., & Weingardt, K. (2012). Is computerized cognitive-behavioural therapy a treatment option for depression in late-life? A systematic review. *The British Journal of Clinical Psychology*, 51(4), 459-64.

- Crepaz-Keay, D. (2010). *Self-Management of Mental Health Problems*. Mental Health Foundation, London. Retrieved from: http://www.euro.who.int/__data/assets/pdf_file/0018/124560/E94377.pdf.pdf.
- Critical Appraisal Skills Programme (2018). *CASP Qualitative Assessment Checklist*. [online] Retrieved from: <https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist-2018.pdf>
- De Vos-Kerkhof, E., Geurts, D., Wiggers, M., Moll, H., & Oostenbrink, R. (2015). Tools for 'safety netting' in common paediatric illnesses: A systematic review in emergency care. *Archives of Disease in Childhood*, 101(2), 131-139.
- Dear, B., Zou, J., Titov, N., Lorian, C., Johnston, L., Spence, J., . . . Knight, R. (2012). Internet-delivered cognitive behavioural therapy for depression: A feasibility open trial for older adults. *Australian & New Zealand Journal of Psychiatry*, 47(2), 169-176.
- Deci, E., & Ryan, R.M. (2015). Self-Determination Theory. 486-491.
- Department of Health (2012). Implementing a ban on age discrimination in the NHS-making effective, appropriate decisions. London. Department of Health. Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/212944/ban-on-age-discrimination.pdf
- Donker, T., Griffiths, K. M., Cuijpers, P., & Christensen, H. (2009). Psychoeducation for depression, anxiety and psychological distress: A meta-analysis. (Research article). *BMC Medicine*, 7, 79.
- Dozeman, E., Van Schaik, D., Van Marwijk, H., Stek, M., Beekman, A., & Van der Horst, H. (2011). Feasibility and effectiveness of activity-scheduling as a guided self-help intervention for the prevention of depression and anxiety in residents in homes for the elderly: A pragmatic randomized controlled trial. *International Psychogeriatrics*, 23(6), 969-978.
- Durazo, E., Jones, M., Wallace, S., Van Arsdale, J., Aydin, M., & Stewart, C. (2011). The Health Status and Unique Health Challenges of Rural Older Adults in California. *Health Policy Brief*. Retrieved from: <http://healthpolicy.ucla.edu/publications/Documents/PDF/The%20Health%20Status%20and%20Unique%20Health%20Challenges%20of%20Rural%20Older%20Adults%20in%20California.pdf>
- Elsesgood, K., & Powell, D. (2008). Computerised cognitive-behaviour therapy (cCBT) and older people: A pilot study to determine factors that influence willingness to engage with cCBT. *Counselling and Psychotherapy Research*, 8(3), 189-192.
- Farrer, L., Leach, L., Griffiths, K. M., Christensen, H., & Jorm, A. F. (2008). Age differences in mental health literacy. *BMC Public Health*, 8, 125. doi:10.1186/1471-2458-8-125
- Faul, F., Erdfelder, E., Buchner, A., & Lang, A. G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.
- Fischer, E., & Farina, A. (1995). Attitudes toward seeking psychological professional help: A shortened form and considerations for research. *Journal of College Student Development*, 36, 368-373

- Fisher, L., & Goldney, R. (2003). Differences in community mental health literacy in older and younger Australians. *International Journal of Geriatric Psychiatry*, 18(1), 33-40. doi:10.1002/gps.769
- Floyd, M., Scogin, F., McKendree-Smith, N. L., Floyd, D. L., & Rokke, P. D. (2004). Cognitive Therapy for Depression: A Comparison of Individual Psychotherapy and Bibliotherapy for Depressed Older Adults. *Behavior Modification*, 28(2), 297-318.
- Fuller, J., Edwards, J., Procter, N., & Moss, J. (2000). How Definition of Mental Health Problems can Influence Help Seeking in Rural and Remote Communities. *Australian Journal of Rural Health*, 8(3), 148-153. doi:10.1046/j.1440-1584.2000.00303.x
- Guirguis-Younger, M., Cappeliez, P., & Younger, A. (2008). A community-based intervention for treating depression in seniors. *Canadian Journal Of Nursing Research*, 40(1), 61-79.
- Gum, A., Petkus, A., McDougal, S., Present, M., King-Kallimanis, B., & Schonfeld, L. (2009). Behavioral health needs and problem recognition by older adults receiving home-based aging services. *International Journal Of Geriatric Psychiatry*, 24(4), 400-408.
- Hadjimina, E., & Furnham, A. (2017). Influence of age and gender on mental health literacy of anxiety disorders. *Psychiatry Research*, 251, 8-13. doi:10.1016/j.psychres.2017.01.089
- Hauenstein, E. J., Petterson, S., Rovnyak, V., & Wagner, D. (2006). Rurality, gender, and mental health treatment. *Family and Community Health*, 29(3), 169-185.
- Hayes, S. C., Luoma, J. B., Bond, F.W., Masuda, A., & Lillis, J. (2006). Acceptance and Commitment Therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, 44(1), 1-25. doi:10.1016/j.brat.2005.06.006
- Hayes, S., & Gifford, E. (1997). The Trouble with Language: Experiential Avoidance, Rules, and the Nature of Verbal Events. *Psychological Science*, 8(3), 170-173.
- Hayes, S., Wilson, K., Gifford, E., Follette, V., Strosahl, K., Beutler, Larry E., & Follette, William C. (1996). Experiential Avoidance and Behavioral Disorders: A Functional Dimensional Approach to Diagnosis and Treatment. *Journal of Consulting and Clinical Psychology*, 64(6), 1152-1168.
- Hobbs, M.J., Joubert, A.E., Mahoney, A.E.J., & Andrews, G. (2018). Treating late-life depression: Comparing the effects of internet-delivered cognitive behavior therapy across the adult lifespan. *Journal of Affective Disorders*, 226, 58-65.
- Hoge, M., Karel, M., Zeiss, A., Alegria, M., & Moye, J. (2015). Strengthening Psychology's Workforce for Older Adults. *American Psychologist*, 70(3), 265-278.
- Holman, D. (2015). Exploring the relationship between social class, mental illness stigma and mental health literacy using British national survey data. *Health*, 19(4), 413-429. doi:10.1177/1363459314554316
- Holvast, F., Massoudi, B., Oude Voshaar, R. C., Verhaak, P. F. M., (2017). Non-pharmacological treatment for depressed older patients in primary care: A systematic review and meta-analysis. *Plos One*, 12(9), E0184666.

- IBM Corp. (2016). IBM SPSS Statistics for Windows, Version 24.0. Armonk, NY: IBM Corp.
- INVOLVE (2016). *The impact of public involvement on the ethical aspects of research*. NHS Health Research Authority. Retrieved from: <http://www.hra.nhs.uk/documents/2016/05/impact-public-involvement-ethical-aspects-research-updated-2016.pdf>
- Joling, K., van Hout, H., Van't Veer-Tazelaar, P., van der Horst, H., Cuijpers, P., van de Ven, P., & ... van Marwijk, H. J. (2011). How effective is bibliotherapy for very old adults with subthreshold depression? A randomized controlled trial. *American Journal Of Geriatric Psychiatry*, 19(3), 256-265. doi:10.1097/JGP.0b013e3181ec8859
- Jones, S.L. (2016). A randomized controlled trial of guided internet-delivered cognitive behaviour therapy for older adults with generalized anxiety. *Journal of Anxiety Disorders.*, 37, 1-9.
- Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B., Pollitt, P. (1997). Mental health literacy: A survey of the public's ability to recognize mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia*, 166(4): 182–6. Retrieved from <https://www.mja.com.au/journal/1997/166/4/mental-health-literacy-survey-publics-ability-recognise-mental-disorders-and>
- Kaltenthaler, E., Parry, G., Beverley, C., & Ferriter, M. (2008). Computerised cognitive-behavioural therapy for depression: Systematic review. *British Journal Of Psychiatry*, 193(3), 181-184.
- Kim, Y., Rhee, T., Lee, H., Park, B., & Sharratt, M. (2017). Mental health literacy as a mediator in use of mental health services among older korean adults. *International Psychogeriatrics*, 29(2), 269-279.
- Kutcher, S., Wei, Y., & Coniglio, C. (2016). Mental Health Literacy: Past, Present, and Future. *The Canadian Journal of Psychiatry*, 61(3), 154-158.
- Lamers, S., Bohlmeijer, E., Korte, J., & Westerhof, G. (2014). The efficacy of life-review as online-guided self-help for adults: A randomized trial. *Journals of Gerontology.*, 70(1), 24-34.
- Landreville, P. (1998). Cognitive bibliotherapy for depression in older adults with a disability. *Clinical Gerontologist*, 19(3), 69-75. Retrieved from <https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/57656645?accountid=10673>
- Landreville, P., & Bissonnette, L. (1997). Effects of Cognitive Bibliotherapy for Depressed Older Adults with a Disability. *Clinical Gerontologist*, 17(4), 35-55.
- Landreville, P., Gosselin, P., Grenier, S., Hudon, C., & Lorrain, D. (2016). Guided self-help for generalized anxiety disorder in older adults. *Aging & Mental Health*, 20(10), 1070-1083.
- Law, J., Laidlaw, K., & Peck, D. (2010). Is Depression Viewed as an Inevitable Consequence of Age? The "Understandability Phenomenon" in Older People. *Clinical Gerontologist*, 33(3), 194-209. doi: /abs/10.1080/073171111003773627
- Lee, M. (2007). *Improving Services and Support for Older People with Mental Health Problems*. The Second Report from the UK Inquiry into Mental Health and Well-Being in Later Life. Age Concern, London. Retrieved from: <https://www.ageuk.org.uk/documents/en-gb/for-professionals/health-and-well->

- being/improving_services_and_support_for_older_people_with_mental_health_problems_executive_summary_2007_pro.pdf?dtrk=true.
- Lievesley, N. (2009). *Ageism and age discrimination in mental health care in the UK*. Centre for policy on aging. Retrieved from:
http://www.cpa.org.uk/information/reviews/CPA-ageism_and_age_discrimination_in_mental_health_care-report.pdf.
- Mackenzie, C., Gekoski, W., & Knox, V. (2006). Age, gender, and the underutilisation of mental health services: The influence of help-seeking attitudes. *Aging & Mental Health*, 10(6), 574-582.
doi:10.1080/13607860600641200
- Mayston, R., Habtamu, K., Medhin, G., Alem, A., Fekadu, A., Habtamu, A., . . . Hanlon, C. (2017). Developing a measure of mental health service satisfaction for use in low income countries: A mixed methods study. *BMC Health Services Research*, 17(1), 183.
- McMurchie, W., Macleod, F., Power, K., Laidlaw, K., & Prentice, N. (2013). Computerised cognitive behavioural therapy for depression and anxiety with older people: A pilot study to examine patient acceptability and treatment outcome. *International Journal of Geriatric Psychiatry*, 28(11), 1147-1156.
- Mental Health Commission of Canada. (2012). *Changing directions, changing lives: The mental health strategy for Canada*. Retrieved from:
https://www.mentalhealthcommission.ca/sites/default/files/MHStrategy_Strategy_ENG.pdf.
- Mental Health Foundation (2016). *Fundamental Facts about mental health*. Retrieved from: <https://www.mentalhealth.org.uk/publications/fundamental-facts-about-mental-health-2016>.
- Mental Health Foundation (2019). Retrieved from: <https://www.mentalhealth.org.uk/a-to-z/s/stigma-and-discrimination>
- Mind (2013). *We still need to talk: a report on access to talking therapies*. Retrieved from: https://www.mind.org.uk/media/494424/we-still-need-to-talk_report.pdf
- Mind (2019). *Stepped Care Model*. Retrieved from: <https://wellbeinginfo.org/self-help/mental-health/stepped-care/>
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G. The PRISMA Group (2009). referred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med* 6(7): e1000097.
doi:10.1371/journal.pmed1000097
- National Health Service (2018). Retrieved from: <https://www.england.nhs.uk/wp-content/uploads/2018/02/choice-in-mental-health-care-v2.pdf>
- National Healthcare Disparities Report. (2010). Rockville, MD : USDHHS, Agency for Healthcare Research And Quality, 2011. www.ahrq.gov/qual/qdrdr10.htm .
- National Institute for Clinical Excellence (2011). Retrieved from:
<https://www.nice.org.uk/guidance/cg123/chapter/1-guidance#improving-access-to-services>.
- National Records of Scotland (2017). Retrieved from:
<https://www.nrscotland.gov.uk/files/statistics/council-area-data-sheets/scottish-borders-factsheet.pdf>

- New Ways Partners. (2011). *Population of borders towns and villages*. Retrieved from: <http://www.ourscottishborders.com/live/towns/populations>
- NHS Education for Scotland (2015). *Psychological Interventions in Physical Health Care: The need and the Economic Case*. Retrieved from: https://www.nes.scot.nhs.uk/media/3967641/psychological_interventions_in_physical_health_care_the_need_and_the_economic_case.pdf
- NHS Scotland: Information Services Division (2017). *Psychological Therapies Waiting Times*. Retrieved from: <http://www.isdscotland.org/Health-Topics/Waiting-Times/Publications/2017-03-07/2017-03-07-WT-PsychTherapies-Report.pdf>
- O'Connor, M., & Casey, L. (2015). The Mental Health Literacy Scale (MHLS): A new scale-based measure of mental health literacy. *Psychiatry Research*, 229(1-2), 511-516. doi: 10.1016/j.psychres.2015.05.064.
- O'Connor, M., Casey, L., & Clough, B. (2014). Measuring mental health literacy a review of scale-based measures. *Journal of Mental Health*, 23(4), 197-204. doi: 10.3109/09638237.2014.910646.
- Office for National Statistics (2017). *Internet Users in the U.K.* Retrieved from: <https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/internetusers/2017>.
- O'Moore, K. A., Newby, J. M., Andrews, G., Hunter, D. J., Bennell, K., Smith, J., Williams, A.D. (2018). Internet Cognitive-Behavioral Therapy for Depression in Older Adults With Knee Osteoarthritis: A Randomized Controlled Trial. *Arthritis Care & Research*, 70(1), 61-70.
- Palinkas, L., Criado, V., Fuentes, D., Shepherd, S., Milian, H., Folsom, D., & Jeste, D. (2007). Unmet needs for services for older adults with mental illness: Comparison of views of different stakeholder groups. *The American Journal of Geriatric Psychiatry*, 15(6), 530-40. doi: 10.1097/JGP.0b013e3180381505
- Pepin, R., Segal, D., & Coolidge, F. (2009). Intrinsic and extrinsic barriers to mental health care among community-dwelling younger and older adults. *Aging & Mental Health*, 13(5), 769-777. doi: 10.1080/13607860902918231.
- Petkus, A., Gum, A., & Wetherell, J. (2012). Thought suppression is associated with psychological distress in homebound older adults. *Depression and Anxiety*, 29(3), 219-225.
- Pettigrew, S., Donovan, R., Pescud, M., Boldy, D., & Newton, R. (2010). Mature adults' attitudes to mental health service utilisation. *Australian Psychologist*, 45(2), 141-150.
- Pinquart, M., Duberstein, P. R., & Lyness, J. M. (2007). Effects of psychotherapy and other behavioral interventions on clinically depressed older adults: A meta-analysis. *Aging & Mental Health*, 11(6), 645-657. doi:<http://dx.doi.org.ezproxy.is.ed.ac.uk/10.1080/13607860701529635>
- Piper, S.E., Bailey, P.E., Lam, L.T., & Kneebone, I.I (2018). Predictors of mental health literacy in older people. *Archives of Gerontology and Geriatrics*, 79, 52-56.

- Poon, C. S. K., Koehler, D. J., & Buehler, R. (2014). On the Psychology of Self-prediction: Consideration of Situational Barriers to Intended Actions. *Judgment and Decision Making*, 9(3), 207-225.
- Raue, P., & Sirey, J. (2011). Designing personalized treatment engagement interventions for depressed older adults. *The Psychiatric Clinics of North America*, 34(2), 489-500, x.
- Reavley, N., Too, T., & Zhao, M. (2015). *National Surveys of Mental Health Literacy and Stigma and National Survey of Discrimination and Positive Treatment*. Retrieved from:
<https://nswmentalhealthcommission.com.au/sites/default/files/Report%20-%20National%20Surveys%20of%20Mental%20Health%20Literacy%2C%20Stigma%20and%20Discrimination%20-%20NSW%20findings.pdf>
- Rost, K., Smith, G.R., & Taylor, J.L. (1993). Rural-urban differences in stigma and the use of care for depressive disorders. *The Journal of Rural Health*, (1), 57-62.
- Royal Australian and New Zealand College of Psychiatrists. (2011). *Priority must be given to investment that improves the mental health of older Australians*. Position statement 67. Melbourne: RANZCP. Retrieved from:
<https://www.ranzcp.org/news-policy/policy-submissions-reports/document-library/priority-must-be-given-to-the-investment-that-impr>
- Sarkisian, C., Lee, Henderson, M., & Mangione, C. (2003). Do Depressed Older Adults Who Attribute Depression to "Old Age" Believe It Is Important to Seek Care? *Journal of General Internal Medicine*, 18(12), 1001-1005.
doi:10.1111/j.1525-1497.2003.30215.x
- Schomerus, G., Matschinger, H., & Angermeyer, M. (2009). Attitudes that determine willingness to seek psychiatric help for depression: A representative population survey applying the Theory of Planned Behaviour. *Psychological Medicine*, 39(11), 1855-1865.
- Scogin, F., Fairchild, J. K., Yon, A., Welsh, D. L., & Presnell, A. (2014). Cognitive bibliotherapy and memory training for older adults with depressive symptoms. *Aging & Mental Health*, 18(5), 554-560.
- Scogin, F., Hamblin, D., & Beutler, L. (1987). Bibliotherapy for depressed older adults: A self-help alternative. *Gerontologist*, 27, 383-387.
- Scogin, F., Jamison, C., & Davis, N. (1990). Two-year follow-up of bibliotherapy for depression in older adults. *Journal of Consulting and Clinical Psychology*, 58, 665-667.
- Scogin, F., Jamison, C., & Gochneaur, K. (1989). Comparative efficacy of cognitive and behavioral bibliotherapy for mildly and moderately depressed older adults. *Journal of Consulting and Clinical Psychology*, 57, 403-407. Retrieved from <https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/57769407?accountid=10673>
- Scogin, F., Welsh, D., Hanson, A., Stump, J., & Coates, A. (2005). Evidence-Based Psychotherapies for Depression in Older Adults. *Clinical Psychology: Science and Practice*, 12(3), 222-237.

- Scottish Borders Council (2012). *Equality Data Profile*. Retrieved from: https://www.scotborders.gov.uk/download/downloads/id/328/data_profile_2012_update.pdf
- Scottish Borders Health & Social Care Partnership (2015). *Working Together for the Best Possible Health and Wellbeing in our Communities*. Retrieved from: http://www.nhsborders.scot.nhs.uk/media/382172/Facts_and_Stats_document_September_2015.pdf
- Scottish Borders Mental Health Strategy (2017). Retrieved from: <http://www.nhsborders.scot.nhs.uk/media/521799/mentalhealthstrategy17.pdf>
- Seeley, J. R., Manitsas, T., & Gau, J. M. (2017). Feasibility study of a peer-facilitated low-intensity cognitive-behavioral intervention for mild to moderate depression and anxiety in older adults. *Aging & Mental Health*, 21(9), 968-974. doi:10.1080/13607863.2016.1186152
- Segal, D., Coolidge, F., Mincic, M., & O'Riley, A. (2005). Beliefs about mental illness and willingness to seek help: A cross-sectional study. *Aging & Mental Health*, 9(4), 363-367.
- Shah, A. (2010). Efficacy of an audio-based cognitive behavioral therapy for older adults with depression (Order No. 3439845). Available from ProQuest Dissertations & Theses Global. (851807565). Retrieved from <https://search-proquest-com.ezproxy.is.ed.ac.uk/docview/851807565?accountid=10673>
- Shenkin, S., Harrison, J., Wilkinson, T., Dodds, R., & Ioannidis, J. (2017). Systematic reviews: Guidance relevant for studies of older people. *Age and Ageing*, 46(5), 722-728.
- Silfvernagel, K., Westlinder, A., Andersson, S., Bergman, K., Diaz Hernandez, R., Fallhagen, L., . . . Andersson, G. (2018). Individually tailored internet-based cognitive behaviour therapy for older adults with anxiety and depression: A randomised controlled trial. *Cognitive Behaviour Therapy*, 47(4), 286-300.
- Singh-Manoux, A., Dugravot, A., Fournier, A., Abell, J., Ebmeier, K., Kivimäki, M., & Sabia, S. (2017). Trajectories of Depressive Symptoms Before Diagnosis of Dementia: A 28-Year Follow-up Study. *JAMA Psychiatry*, 74(7), 712-718.
- Slim, K., Nini, E., Forestier, D., Kwiatkowski, F., Panis, Y., & Chipponi, J. (2003). Methodological index for non-randomized studies (MINORS): Development and validation of a new instrument. *ANZ Journal of Surgery*, 73(9), 712-716.
- Smith, J., Newby, J.M., Burston, N., -Murphy, M.J., Michael, S., Mackenzie, A., . . . Andrews, G. (2017). Help from home for depression: A randomised controlled trial comparing internet-delivered cognitive behaviour therapy with bibliotherapy for depression. *Internet Interventions*, 9(C), 25-37.
- Spek, V., Cuijpers, P., Nyklíček, I., Smits, N., Riper, H., Keyzer, J., & Pop, V. (2008). One-year follow-up results of a randomized controlled clinical trial on internet-based cognitive behavioural therapy for subthreshold depression in people over 50 years. *Psychological Medicine*, 38(5), 635-639.
- Spek, V., Nyklíček, I., Smits, N., Cuijpers, P., Riper, H., Keyzer, J., & Pop, V. (2007). Internet-based cognitive behavioural therapy for subthreshold depression in people over 50 years old: A randomized controlled clinical trial. *Psychological Medicine*, 37(12), 1797-1806.

- Stein-Shvachman, I., Karpas, D., & Werner, P. (2013). Depression Treatment Non-adherence and its Psychosocial Predictors: Differences between Young and Older Adults? *Aging And Disease*, 4(6), 329-336.
- Stickland, N., & Gentry, T. (2016). *Hidden in Plain Sight: the unmet needs of older adults*. Age U.K . Retrieved from: http://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Policy/health-and-well-being/Hidden_in_plain_sight_older_peoples_mental_health.pdf?dtrk=true
- Swami, V., Persaud, R., & Furnham, A. The recognition of mental health disorders and its association with psychiatric skepticism, knowledge of psychiatry, and the big five personality factors: an investigation using the overclaiming technique. *Social Psychiatry Epidemiology*, 46, 181–9. doi:10.1007/s00127-010-0193-3.
- Tanaka, S., Ishikawa, E., Mochida, A., Kawano, K., & Kobayashi, M. (2015). Effects of Early-Stage Group Psychoeducation Programme for Patients with Depression. *Occupational Therapy International*, 22(4), 195-205.
- The Australian Government (2006). *Pathways of recovery: preventing further episodes of mental illness* (monograph) . Department of Health. Retrieved from: <http://health.gov.au/internet/publications/publishing.nsf/Content/mental-pubs-p-mono-toc~mental-pubs-p-mono-pop~mental-pubs-p-mono-pop-old>.
- The Equality Act. (2010). Retrieved from: https://www.legislation.gov.uk/ukpga/2010/15/pdfs/ukpga_20100015_en.pdf
- The Health Foundation (2013). *Measuring Patient Experience*. Retrieved from: <https://www.health.org.uk/sites/default/files/MeasuringPatientExperience.pdf>.
- The Scottish Government (2009). *Use and Understanding of the Scottish Government Urban Rural Classification*. Retrieved from: <https://www2.gov.scot/Publications/2009/08/07115535/14>
- The Scottish Government (2016). *Mental Health in Scotland – a 10 year vision*. ISBN: 978-1-78652-371-6. Edinburgh: Crown copyright 2016. Retrieved from: https://consult.scotland.gov.uk/mental-health-unit/mental-health-in-scotland-a-10-year-vision/supporting_documents/mental%20health%20in%20scotland%2010%20year%20vision.pdf
- The Scottish Government (2017). *Making it Easier: A Health Literacy Action Plan*. Retrieved from: <https://www.gov.scot/binaries/content/documents/govscot/publications/publication/2017/11/making-easier-health-literacy-action-plan-scotland-2017-2025/documents/00528139-pdf/00528139-pdf/govscot:document/>
- The Scottish Government (2018). *Mental Health Strategy 2017-2027*. 1st Progress Report. Retrieved from: <https://www.gov.scot/Resource/0054/00540827.pdf>.
- Tomczyk, S., Muehlan, H., Freitag, S., Stolzenburg, S., Schomerus, G., & Schmidt, S. (2018). Is knowledge "half the battle"? The role of depression literacy in help-seeking among a non-clinical sample of adults with currently untreated mental health problems. *Journal of Affective Disorders*, 238, 289-296.
- Travers, C., & Bartlett, H. (2011). Silver Memories: Implementation and evaluation of a unique radio program for older people. *Aging & Mental Health*, 15(2), 169-177.

- U.K. Government (2016). *2011 rural urban classification*. Retrieved from:
<https://www.gov.uk/government/statistics/2011-rural-urban-classification>
- United Nations (2015): *United Nations Department of Economic and Social Affairs/Population Division World Population Prospects: The 2015 Revision, Key Findings and Advance Tables*. New York. Retrieved from:
https://esa.un.org/unpd/wpp/publications/files/key_findings_wpp_2015.pdf
- Walker, J. G., Mackinnon, A. J., Batterham, P., Jorm, A. F., Hickie, I., McCarthy, A., . . . Christensen, H. (2010). Mental health literacy, folic acid and vitamin B12, and physical activity for the prevention of depression in older adults: Randomised controlled trial. *The British Journal of Psychiatry*, 197(1), 45-54. doi:<http://dx.doi.org.ezproxy.is.ed.ac.uk/10.1192/bjp.bp.109.075291>
- Wetherell, J. L., Petkus, A. J., McChesney, K. B., Stein, M. H., Judd, P. D., Rockwell, E. L., . . . Patterson, T. (2009). Older Adults Are Less Accurate Than Younger Adults at Identifying Symptoms of Anxiety and Depression. *The Journal of Nervous and Mental Disease*, 197(8), 623-626. doi: 10.1097/NMD.0b013e3181b0c081
- White, M., & Casey, L. (2016). Helping older adults to help themselves: The role of mental health literacy in family members. *Aging & Mental Health*, 1-9. doi: <http://dx.doi.org/10.1080/13607863.2016.1206513>
- Wolgaast, M. (2014). "What Does the Acceptance and Action Questionnaire (AAQ-II) Really Measure?" *Behavior Therapy* 45.6 (2014): 831-39. Web.
- World Health Organization (2016). *Multisectoral action for a life course approach to healthy ageing: draft global strategy and plan of action on ageing and health*. Geneva. Available from:
http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_17-en.pdf
- World Health Organisation (2017). *Mental Health of Older Adults*. Retrieved from:
<http://www.who.int/news-room/fact-sheets/detail/mental-health-of-older-adults>
- World Health Organisation (2018). *Ageing and Lifecourse*. Retrieved from:
<http://www.who.int/ageing/en/>.
- Wuthrich, V., Frei, J., Pachana, N., & Oude Voshaar, R. (2015). Barriers to treatment for older adults seeking psychological therapy. *International Psychogeriatrics*, 27(7), 1227-1236. doi: 10.1017/S1041610215000241.
- Zautra, A.J. (2012). Phone-based interventions with automated mindfulness and mastery messages improve the daily functioning for depressed middle-aged community residents. *Journal of Psychotherapy Integration*, 22(3), 206-228.
- Zou, J.B., Dear, B.F., Titov, N., Lorian, C.N., Johnston, L., Spence, J., . . . Sachdev, P. (2012). Brief internet-delivered cognitive behavioral therapy for anxiety in older adults: A feasibility trial. *Journal of Anxiety Disorders*, 26(6), 650-655.

Appendix A: Author Guidelines for Clinical Gerontologist

Clinical Gerontologist publishes three types of articles: (1) *Original Research Reports*; (2) *Conceptual Reviews*; (3) *Clinical Comments*. In addition, we accept papers designated as by *New and Emerging Professionals* – which may be any of these three types. All submissions are peer-reviewed, with final decisions made by the Editors. More information on each manuscript type is provided below.

Note, all manuscripts should include five sections consisting of Introduction, Methods, Results, Discussion, and Clinical Implications (when possible, as a bulleted list), except case studies in which a case presentation is substituted for the “Methods and Results” section.

Original research reports include randomized intervention studies, cohort observational studies, survey research, and studies of assessment or diagnostic tests. If describing scale development, please include a useable version of the scale as an appendix when possible. If not, please indicate where the scale can be obtained. The manuscripts should include five sections consisting of Introduction, Methods, Results, Discussion, and Clinical Implications (preferred format is a bulleted list). Maximum length: 5,000 words not including abstract, tables, figures, references.

Original brief reports provide the opportunity to succinctly present a concise research contribution. The manuscripts should include five sections consisting of Introduction, Methods, Results, Discussion, and Clinical Implications (preferred format is a bulleted list). Maximum length: 2,000 words not including abstract, tables, figures, references. The Editors may request that original research reports be shortened to brief report length.

***Conceptual Reviews* may include systematic reviews of the literature, meta-analyses, and/or manuscripts presenting new or revised theoretical models. All reviews should provide systematic, critical assessments of literature that yield conclusions of direct clinical importance to the behavioral health care of older adults. The manuscripts should include five sections consisting of Introduction, Methods of review, Results, Discussion, and Clinical Implications (preferred format is a bulleted list). Maximum length: 6,000 words not including abstract, tables, figures, references.**

Peer reviewed, APA referencing style

Website: <https://www.tandfonline.com/action/authorSubmission?show=instructions&journalCode=wcli20>

Appendix B: Quality Appraisal Tool

Quality Rating for: The Effectiveness of Psychoeducational Interventions on the Well-being of Older Adults: A systematic review

Study Author & Year:

Reviewer Initials:

Date:

MINORS Item & Question	Decision 2: reported and adequate 1: reported but inadequate 0: not reported or N/A	Additional Comments
1. A clearly stated aim: the question addressed should be precise and relevant in the light of available literature.		
2. Inclusion of patients: all patients (satisfying the criteria for inclusion) have been included in the study during the study period (<i>if excluded, details about the reasons for exclusion given</i>).		
3. Prospective collection of data: data were collected according to a protocol established before the beginning of the study (<i>e.g., data collected is consistent with stated aims or hypotheses</i>).		
4. Endpoints appropriate to the aim of the study: unambiguous explanation of the criteria used to evaluate the main outcome which should be in accordance with the question addressed by the study (<i>e.g. are the tools used valid for older adults?</i>). Also, the endpoints should be assessed on an intention-to-treat basis.		
5. Unbiased assessment of the study endpoint: blind evaluation of objective endpoints. Otherwise the reasons for not blinding should be stated. (<i>double-blinding is not required</i>)		
6. Follow-up period appropriate to the aim of the study: the follow-up should		

be sufficiently long to allow the assessment of the main endpoint.		
7. Loss to follow up less than 5%: all patients should be included in the follow up. Otherwise, the proportion lost to follow up should not exceed the proportion experiencing the major endpoint. (5-50% attrition acceptable/adequate if an intention to treat analysis done).		
8. Prospective calculation of the study size: information of the size of detectable difference of interest according to the expected incidence of the outcome event, and information about the level for statistical significance and estimates of power when comparing the outcomes (<i>confidence intervals are not required</i>)		
<i>Additional criteria in the case of comparative study</i>		
9. An adequate control group: having a gold standard diagnostic test or therapeutic intervention recognized as the optimal intervention according to the available published data (<i>e.g. RCT with active treatment control</i>)		
10. Contemporary groups: control and studied group should be managed during the same time period (no historical comparison).		
11. Baseline equivalence of groups: the groups should be similar regarding the criteria other than the studied endpoints. Absence of confounding factors that could bias the interpretation of the results <i>or that confounding variables are accounted for in the analyses.</i>		
12. Adequate statistical analyses: whether the statistics were in accordance with the type of study with calculation of confidence intervals or relative risk (<i>consider: sample size-is there enough power to run the analyses? Do hypotheses match up with results? Parametric testing without justification or when sample size is too small</i>).		

CASP	Yes, Can't Tell, No	Additional Comments
<p>7. Have ethical issues been taken into consideration?</p> <p>Consider:</p> <ul style="list-style-type: none"> • If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained • If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study) • If approval has been sought acquired from the ethics committee 		

Note. The sections in italics were added specifications from the authors to ensure consistency of rating.

Appendix C: Author Guidelines for Journal of Aging & Mental Health

Aging & Mental Health provides a leading international forum for the rapidly expanding field which investigates the relationship between the aging process and mental health. The journal addresses the mental changes associated with normal and abnormal or pathological aging, as well as the psychological and psychiatric problems of the aging population. The journal also has a strong commitment to interdisciplinary and innovative approaches that explore new topics and methods.

Aging & Mental Health covers the biological, psychological and social aspects of aging as they relate to mental health. In particular it encourages an integrated approach for examining various biopsychosocial processes and etiological factors associated with psychological changes in the elderly. It also emphasizes the various strategies, therapies and services which may be directed at improving the mental health of the elderly and their families. In this way the journal promotes a strong alliance among the theoretical, experimental and applied sciences across a range of issues affecting mental health and aging. The emphasis of the journal is on rigorous quantitative, and qualitative, research and, high quality innovative studies.

Readership: The journal is directed at an international audience, with editors in London, Hong Kong and North America and an Editorial Board from around the world. The readership of the journal is drawn from many disciplines, with particularly strong representation from psychiatrists and psychologists working with older people. Its strong scientific foundation makes it of considerable interest to basic and applied scientists interested in the biological, psychological and social aspects of aging and mental health.

Aging & Mental Health is an international, peer-reviewed journal publishing high-quality, original research. Please note that this journal only publishes manuscripts in English.

Aging & Mental Health accepts the following types of article:

- Original article
- Short report

Original article

- Should be written with the following elements in the following order: title page (including Acknowledgments as well as Funding and grant-awarding bodies); abstract; keywords; main text; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figure caption(s) (as a list)
- Should be no more than 5000 words, inclusive of figure captions, footnotes, endnotes, excluding references, cover pages and tables/figures.
- Should contain a structured abstract of 250 words. A structured abstract should cover (in the following order): Objectives, Method, Results, and Conclusion. Read tips on writing your abstract.
- Between 3 and 5 **keywords**.

APA referencing

Website:

<https://www.tandfonline.com/action/authorSubmission?show=instructions&journalCode=camh20>

Appendix D: Participant Summary



Thank you!

April 2019

Dear participant,

You are receiving this letter because you took part in a local research survey 'older adults knowledge about mental health' (between 2017-2018) and you indicated that you would like to obtain a summary of the study's findings. I would like to take this opportunity to thank you once again for your participation.

Please find enclosed a summary of the main findings from the research study. I hope they will be of interest to you. If you have any questions or concerns please feel free to contact me on the number or email address included below. The full doctoral thesis will be available at the University of Edinburgh archives.

Kind Regards,

Gwendolyn Cremers (Trainee Clinical Psychologist)

Tel: (07775227129)

Email: s1373579@sms.ed.ac.uk

Mental Health Knowledge Study: Summary Sheet

Background: Older adults around the world are less likely to be referred to mental health services than younger people when they have mental health problems. Government initiatives want to find ways to improve the quality of mental health services and to make such services more accessible to older adults. Research shows that people who have better mental health knowledge are more likely to seek and receive appropriate support for mental health problems. Mental health knowledge (literacy) is not very well researched in older adults or in people who live in rural areas. Some research suggests that older adults (people over 65 years old) no less about mental health than younger people.

Rationale:

- The Borders has a higher older adult population compared to the rest of the U.K. (National Records of Scotland, 2017)
- NHS Borders has one of the lowest referral rates to older adult mental health services in Scotland (NHS Scotland Information Services Division, 2017)
- There is a need for mental health services to find ways to better engage older adults who are experiencing mental health difficulties (Scottish Government, 2016).

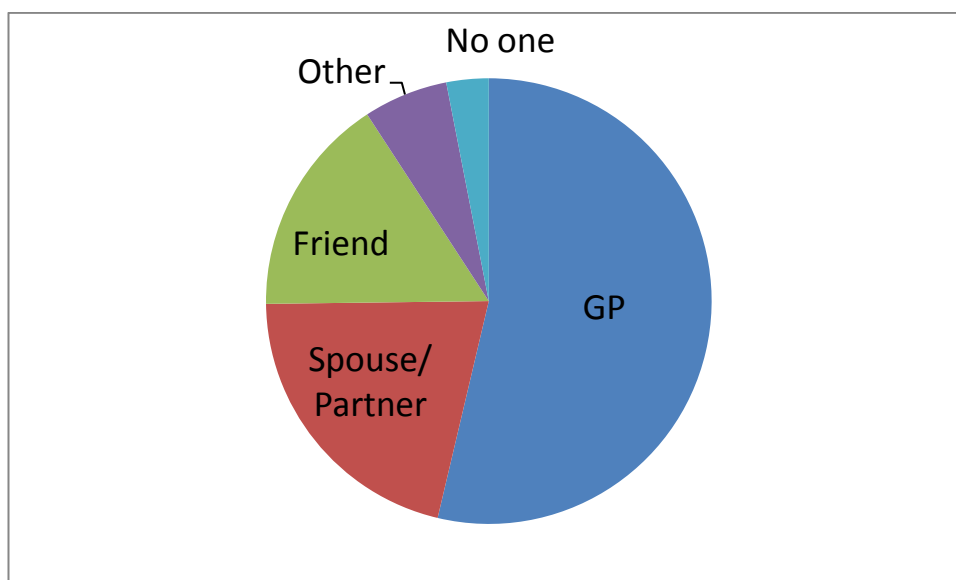
Purpose: This study aimed to find out the level of mental health literacy of older adults in the Scottish Borders and to find out what services and supports people were aware of. It also aimed to explore whether mental health literacy is related to older adult's well-being, their coping styles and their use of mental health services.

Who Participated?

One hundred and fifty one older adults (aged 65 years and older) took part in the study. Two thirds of participants had gone to college or university and the majority of participants were women (61.5%).

Study Findings: Most participants (94.6%) indicated that they would seek help from a GP, followed by a partner (37.2%), a friend (28.2%), other (10.8%) and no one (5.4%). Half of the participants were aware of a wide range of local mental health supports but only a small number of these identified the Mental Health for Older Adults Team or mental health professionals specifically as options.

Where would you seek help from if you had a mental health problem?



Mental health services and supports suggested by participants

Services	Number of participants
• Dementia services (e.g. Alzheimer's society, dementia café, day unit)	18
• General Practitioner	16
• NHS	10
• Mental Health Team for Older Adults	9
• Mental health professionals (e.g. psychiatrists, nurses, psychologists, counsellors)	9
• Adult Mental Health Team	7
• Charities (e.g. Samaritans, SAMH, Penumbra, New Horizons)	6
• Main hospital	5
• Social services	3
• Lunch clubs/support groups	3
• Drop in clinics	2
• Inpatient ward at local hospital	2
• Other (e.g. carers centre, pastoral, advocacy service, crisis team)	4

- Approximately one sixth of respondents (16.2%) had used mental health services at some point in their lives and most participants (96.6%) agreed that they would seek support from a mental health professional if they had a mental health problem. Some older adults who might benefit from mental health services have not accessed them.
- 24.2% of participants described symptoms of mental health difficulty but only 6.1% self-identified as having a mental health problem. Some older adults who experience mental health difficulties do not self-identify as having mental health problems.
- The older adults in this study had higher mental health literacy compared to older adults in an Australian study from 3 years ago. This survey might have appealed to people who were already more knowledgeable about mental health.
- Younger participants and participants who had completed higher education were more likely to have better mental health knowledge.
- Better mental health knowledge was linked to willingness to seek mental health support but not to better mental health.
- Participants who had more avoidant coping styles (e.g. who were more likely to push upsetting thoughts or emotions out of their mind) were less likely to report that they would seek help for mental health problems.
- This was an initial survey with a self-selecting group of people. We can't be sure how representative it is of the wider older-adult community.

Implications for Service Improvement:

Improving rural-dwelling, older adults' mental health knowledge and their awareness of locally available services and supports may help to increase their willingness to seek mental health support. Providing information about local mental health services and supports for older adults may also help to empower older adults to make more informed decisions about their mental health and treatment options. In our sample, GPs were a first point of contact for concerns about mental health, so primary care settings such as health centres may be the best location for providing mental health information to older adults. This could be done through specialist education for GPs and/or information leaflets.

We hope that mental health services and community organisations for older adults can learn from this research and that it offers some new ideas about how to engage and support older adults.

Appendix E: Ethical Approval

RESEARCH ETHICS APPLICATION (REA)



The forms required when seeking ethical approval in the School of Health and Social Sciences have now been merged into this single electronic document. The sections you are required to complete will depend on the nature of your application. Please start to complete the form from the beginning and proceed as guided. On completion the **entire** document should be submitted electronically to your section's ethics tutor using the email addresses detailed on the final page.

FORM OVERVIEW

FORM	COMPLETION
Project registration form	: Compulsory for all applications
Document checklist	: Compulsory for all applications
Level 1 Self Audit form	: To be completed for all research studies that are not subject to review by an external UK based ethical committee.
Level 2 /3 ethical review form	: To be completed when indicated by responses on the Level 1 form.

PROJECT REGISTRATION FORM

This form is the first stage in applying for University ethical approval and should be completed prior to the commencement of any research project. Applications submitted without appropriate documentation will be returned.

Ethical approval is required for all projects by staff or students conducting research, or similar.

Applicants should familiarise themselves with the School's Research Ethics Policy prior to completion.

^{PR1} **Name of Applicant:** Mrs Gwendolyn Cremers

^{PR2} **Name of Supervisor¹:** Dr. Azucena Guzman

¹ Not applicable to staff members.

PR3	Project Title: An Exploration into the relationships between Mental health Literacy, Coping Styles and Psychological Well-being in Older Adults in a Rural Scottish Area.
PR4	Subject Area (section of school): Clinical Psychology
PR5	If student, type of assessed work that this application relates to: Doctoral Thesis
PR6	Planned date of project submission: 1 ST March 2019
PR7	Date ethics application submitted: July 2017
PR8	(Date complete information submitted if different): 17/08/17
PR9	IRAS Approval Number if applicable:
<i>The following to be completed by ethics administrator</i>	
PR10	Date Approved: 4 Sept 2017: 22/08/17
PR11	Amendments Requested Date: 22/09/17
PR12	Amendments Approved Date: 27/09/17
PR13	Reviewer 1
PR14	Reviewer 2 <small>Level 2-3 only</small>

DOCUMENTATION CHECKLIST

DC1 Does your research project require extraction or collection of data abroad?

✓

If No, Skip to 2; **if Yes,**

(i) Does the project require ethics review by 'local' ethics panel (ie abroad)? (✓ one)	No (Skip to 2)	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>
(ii) If yes, local Ethical review needed, please confirm (✓) electronic attachment of:	Application to that ethical review panel (in English) + copy of letter of approval			

DC2 For the purposes of this research study, will you access identifiable² information on any NHS patient?

If No, Skip to 3; **if Yes,**

(i) Please tick yes (✓)	Yes	<input type="checkbox"/>
(ii) Please confirm (✓) electronic attachment of:	Caldicott Guardian approval for use of NHS data (or confirmation that it is not required)	

DC3 Does the project require ethical review by an external UK committee eg NHS REC or Social Work?

If No, Skip to 4; **if Yes,**

(i) Please tick yes (✓)	Yes	<input type="checkbox"/>
(ii) Please confirm (✓) electronic attachment of:	NHS REC (IRAS) /other application form + copy of letter of approval	
(iii) NOTE: You are <u>not</u> required to complete University ethical review forms. Skip to DC6		

DC4 Unless you answered 'yes' to 3, you must also obtain ethical approval through the University of Edinburgh process. Please submit a Level 1 form (with 'Methods' summary) and, if indicated, a level 2-3 form as well.

SHSS Ethics paperwork

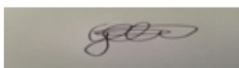
Please indicate the SHSS Ethics forms completed herewith (✓):

Forms: level	Summary of 'Methods'
1	2/3
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

DC5 If you have completed the Level 2/3 form please list any additional documentation provided in support of your application (E.g. Disclosure, consent form, participant information, GP letters etc.)

Documentation Name <small>These should reflect content</small>	(✓)	Documentation Name	(✓)
Participant letter of invitation	✓	Questionnaire Survey	✓
Participant information sheet	✓	Written confirmation NHS REC not required	✓
Participant consent form	✓	R&D approval	✓

DC6 Signatures

<u>Gwendolyn Cremers</u>		<u>13/07/2017</u>
Applicant's Name	Signature	Date signed
<u>Dr Azucena Guzman</u>	<u>Azucena Guzman</u>	<u>12/07/17.</u>
Supervisor³ Name	Signature	Date signed

² 'Identifiable information' refers to information that would allow you to know, or be able to deduce, the identity of a patient. The most common examples of this would be accessing medical records or similar, or accessing a database that includes patients' names.

³ This is not required for staff applications.

LEVEL 1 SELF AUDIT FORM

The audit is to be conducted by all staff and students conducting any type of empirical investigation, including research, audit or service evaluation.

The form should be completed by the principal investigator and, with the exception of staff, signed by a University supervisor.

^{SA1} **Primary Research Question:**

Please tick	What type of research are you planning to do?
	Study of a novel intervention or randomised clinical trial to compare interventions in clinical practice
✓	Study utilising questionnaires, interviews or measures, including auto-ethnographic.
	Study limited to working with routinely collected clinical data
	Meta-analysis or systematic review
	Research database containing non-identifiable information

^{SA2} **Please provide a brief summary of your proposed study. Our interest is in areas of your methodology where ethical issues may arise so please focus your detail on areas such as recruitment, consent, describing your participants and the nature of their involvement and data handling.**

Project Summary:

The proposed project aims to explore the relationships between older adults' self-reported mental health literacy and their self-reported coping style, well-being and other demographic variables (e.g. marital status, income, gender, age).

Recruitment

Data will be collected via questionnaire surveys made available in hardcopy and electronically. The questionnaire packs will be made available online and also distributed in 10-20 community centres across the Borders. Permission to do so has been granted by local organisation management (LIVE Borders) who oversee a range of public venues in the region (e.g. libraries, leisure centres and village halls) and by

Scottish Borders Senior Networking Forum. Furthermore, requests to distribute the packs will also be sought from organisations for older adults' based in the Borders (e.g. Age Scotland). Questionnaire packs will contain a letter of invitations, an information sheet, an informed-consent form, three standardised measures and a demographic questionnaire. It is expected that questionnaire packs will take approximately 20-30 minutes to complete. Questionnaire packs will clearly outline that participants are free to withdraw from the study at any time prior to submitting their questionnaire. Due to the anonymous nature of the study it will not be possible to withdraw participants after submission of the questionnaire.

It is possible that older adult participants will find completing questionnaire pack strenuous. In order to ensure that the questionnaires are as easy as possible to complete, volunteers from the Scottish Borders Senior Networking Forum will be invited to complete the questionnaire and provide feedback. Feedback will be sought on the completion process including clarity, readability, wording, length and duration.

The brief demographic questionnaire will comprise tick-box items detailing age, gender, ethnicity, geographical location (e.g. town/village/countryside), educational attainment, income range, marital status, social engagement, employment (incl. current or past profession), the presence of physical and/or mental health problems, their awareness of community supports/resources and who they would seek support from if they had a mental health problem). Three standardised measures which will be used are the Mental Health Literacy Scale (MHLS: O'Connor & Casey, 2015), Acceptance and Action Questionnaire (AAQ-II; Bond et al., 2011) and the Clinical Outcomes in Routine Evaluation (CORE-10; Barkham et al., 2013)

Sample size

In order to achieve the required sample size for this study a community sample of 265 older adults (aged 65 and older) will be sought. In order to increase the likelihood of achieving the required sample size several considerations will be put in place: 1) minimal inclusion/exclusion criteria will be used, 2) help from a wide range of local agencies (e.g. social clubs, Senior Networking Forum) will be sought to identify potential participants and/or distribute questionnaire packs, 3) given the recent findings that increasing numbers of older adults (e.g. 41% over the age of 75) are frequently using the internet (Office for National Statistics, 2017b) an online version of the questionnaire pack will also be developed. While online recruitment has some advantages such as the potential to reduce costs (e.g. paper/postage) and increase sample size and diversity it also has some potential disadvantages. Although the requirement to live within the Scottish Borders in order to participate will be made clear to all potential participants it may be more difficult to regulate this when participants complete an online survey compared to a questionnaire pack from a local community centre.

Inclusion criteria

In order to maximise sample size and increase the likelihood of achieving a representative sample from the community minimal inclusion and exclusion criteria will be required. Inclusion criteria: 1) Older adults aged ≥ 65 , 2) living in the Scottish Borders, 3) able to speak and understand proficient English, 4) without cognitive impairment and 5) able to provide written consent will be invited to participate in the study. The decision to require a minimum age of 65 years reflects a cut-off commonly accepted in the research literature on older adults.

It will not be possible to ensure that participants' have intact cognitive functioning. In order to reduce the likelihood of older adults' with cognitive impairments participating in the study, the demographic questionnaire will ask participants to indicate whether they have any difficulties with their memory or have received any diagnoses of dementia or Alzheimer's disease. It is unlikely that someone with a significant cognitive impairment would be able to fully complete the questionnaire pack and return it by post. Any returned questionnaires which raise questions about the participants' ability to consent (e.g. questionnaires which are largely incomplete, above and beyond what would be expected, i.e. greater than 20% incomplete) will be excluded from the analysis (see section ER20 for further details).

Participants who would like to receive a summary of the research findings will be instructed (on the questionnaire) to phone or email the primary researcher and leave their details. Participants will be made aware that their answers will be kept anonymous and that their signed consent forms will be filed separately from their completed questionnaire. Pre-paid, addressed envelopes will be provided.

Data Management

All data generated from the study will be non-identifiable and anonymous. Data will be stored on NHS Borders premises in a locked filing cabinet (e.g. completed hardcopies of the questionnaire) for up to five years as required by NHS R&D guidelines. Signed consent forms will be filed separately. Electronically available data (e.g. excel spreadsheets) will not identify the participant. Data gathered will be password protected and stored in encrypted USBs and password protected computers (Data Protection Act, 1998). Data will also be offered for storage at The University of Edinburgh's DataShare repository to ensure preservation and continued access of data (see section ER27). The anonymous data may be accessed by ethically approved studies in the future (as consented by the participants). Consent from participants to use their anonymous data in future studies will be sought as part of the consent process.

Data analysis

All questionnaire data will be input into an Excel spreadsheet and analysed using the statistical software package SPSS.

A breakdown of each hypothesis, the relevant variables and proposed analyses:

Is there a relationship between mental health literacy and experiential avoidance?

(continuous variables) [correlation/non-directional]

How much of the variance in self-reported mental health scores (continuous dependent variable) can be explained by experiential avoidance and mental health literacy (continuous independent variables)? [multiple regression/non-directional]

Are lower mental health literacy (continuous independent variable) and higher experiential avoidance (continuous independent variable) associated with lower service utilisation (categorical dependant variable) in older adults? [logistic regression/directional]

Does mental health literacy (continuous dependent variable 1) mediate the relationship between population characteristics (e.g. gender, education, marital status, income, experiential avoidance, health status, awareness of local resources: binomial, categorical independent variables) and mental health service utilisation (continuous dependent variable 2) in (rural-dwelling), older adults? [structural equation modelling/directional]

Dissemination

The research findings will be disseminated to any participants who indicated an interest in obtaining a lay-summary of the findings, presented to NHS Borders staff and to Scottish Borders Senior Networking Forum. The research article will be submitted for peer-reviewed publication in either 'The Journal of ageing and mental health' or 'The International Journal of Aging and Society.'

Please circle your answer as appropriate:

	ETHICAL ISSUES		
SA3	Bringing the University into disrepute Is there any aspect of the proposed research which might bring the University into disrepute? For example, could any aspect of the research be considered controversial, prejudiced, critical of a minority group or religion etc.?	No	Yes

SA4	<p>Protection of research subject confidentiality</p> <p><i>Will you make every effort to protect research subject confidentiality by conforming to the University of Edinburgh's guidance on data security, protection and confidentiality as specified in: http://www.ed.ac.uk/schools-departments/information-services/services/research-support/data-library/research-data-mgmt/data-security</i></p> <p><i>For example, there are mutually understood agreements about:</i></p> <ul style="list-style-type: none"> (a) non-attribution of individual responses; (b) Individuals, and organisations where necessary, being anonymised in stored data, publications and presentations; (c) publication and feedback to participants and collaborators; (d) With respect to auto-ethnographic work it is recognised that the subject's anonymity cannot be maintained but the confidentiality of significant others must be addressed. 	<i>No</i>	Yes
-----	--	-----------	------------

SA5	<p>Data protection and consent</p> <p><i>Will you make every effort to ensure the confidentiality of any data arising from the project by complying with the University of Edinburgh's Data Protection procedures (see www.recordsmanagement.ed.ac.uk);</i></p> <p>For example</p> <p>(a) Ensuring any participants recruited give consent regarding data collection, storage, archiving and destruction as appropriate;</p> <p>(c) Identifying information², (e.g. consent forms) is held separately from data and is only accessible by the chief investigator and their supervisors;</p> <p>(e) There are no other special issues arising regarding confidentiality/consent.</p> <p>(f) That where NHS data is being accessed Caldicott Guardian approval has been obtained.</p>	No	Yes
SA6	<p>Duty to disseminate research findings</p> <p>Are there issues which will prevent all participants and relevant stakeholders having access to a clear, understandable and accurate summary of the research findings?</p>	No	Yes
SA7	<p>Moral issues and Researcher/Institutional Conflicts of Interest</p> <p><i>Are there any SPECIAL MORAL ISSUES/CONFLICTS OF INTEREST?</i></p> <p>Examples include, but are not limited to:</p> <p>(a) Where the purposes of research are concealed;</p> <p>(b) Where respondents are unable to provide informed consent</p> <p>(c) Where there is financial or non-financial benefit for <i>anyone</i> involved in the research, or for their relative or friend.</p> <p>(d) Where research findings could impinge negatively or differentially upon participants or stakeholders (for example when selecting an unrepresentative sample of a larger population).</p> <p>(e) Where there is a dual relationship between the researcher and subject? E.g. Where the researcher is also the subject's practitioner or clinician.</p>	No	Yes

² 'Identifiable information' refers to information that would allow you to know, or be able to deduce, the identity of a patient. The most common examples of this would be accessing medical records or similar, or accessing a database that includes patients' names.

SA8	<p>Potential physical or psychological harm, discomfort or stress</p> <p>Is there any foreseeable potential for:</p> <p>(a) significant psychological harm or stress for participants</p> <p>(b) significant physical harm or discomfort for participants?</p> <p>(c) significant risk to the researcher?</p> <p>Examples of issues/ topics that have the potential to cause psychological harm, discomfort or distress and should lead you to answer 'yes' to this question include, but are not limited to:</p> <p><i>Relationship breakdown; bullying; bereavement; mental health difficulties; trauma / PTSD; Violence or sexual violence; physical, sexual or emotional abuse in either children or adults; feedback of results from the project's assessments.</i></p>	No	Yes
SA9	<p>Vulnerable participants</p> <p>Will you be recruiting any participants or interviewees who could be considered vulnerable?</p> <p>Examples of vulnerable groups, the inclusion of which should lead you to answer yes to this question include, but are not limited to:</p> <p>Clients or patients of either the researcher OR the person recruiting subjects; Children & young people; people who are in custody or care for example, offenders, looked after children or nursing home resident; persons with mental health difficulties including those accessing self-help groups; auto-ethnographic researchers examining distressing topics.</p>	No	Yes

Assessment outcome:


SA10 **Have you circled any answers in BOLD typescript?** Please tick as appropriate

- No** ☐ (i) Your responses on the completed self-audit confirm the ABSENCE OF REASONABLY FORESEEABLE ETHICAL RISKS.
(ii) Please now read the guidance below and provide the required signatures.
(iii) You are NOT REQUIRED to complete a level 2/3 application form.
(iv) Please submit the UoE HSS Ethics Application Form electronic document (in its entirety) along with ALL additional required documentation, failure to do so will mean that your form is returned to you.
- Yes** ☒ (i) Your responses on the completed self-audit indicate that we require further information to consider your application.
(ii) Read the Guidance below and provide the required signatures.
(ii) You **ARE REQUIRED** to complete a level 2/3 application form.
- (III) Please continue to page x of this document where you will find the level 2/3 form

Subsequent to submission of this form, any alterations in the proposed methodology of the project should be reviewed by both the applicant and their supervisor. If the change to methodology results in a change to any answer on the form, then a resubmission to the Ethics subgroup is required.

The principal investigator is responsible for ensuring compliance with any additional ethical requirements that might apply, and/or for compliance with any additional requirements for review by external bodies.

ALL forms should be submitted in electronic format. Digital signatures or scanned in originals are acceptable. The applicant should keep a copy of all forms for inclusion in their thesis. HSS Section specific instructions for the submission of forms for each section is overleaf.

<u>Gwendolyn Cremers</u>		<u>11/07/17</u>
Student Name	Student Signature	Date
<u>Dr Azucena Guzman</u>	<u>Azucena Guzman</u>	<u>12/07/17</u>
*Supervisor Signature	Supervisor Name	Date

*NOTE to Supervisor: Ethical review will be based only on the information contained in this form. If countersigning this check-list as truly warranting all 'No' answers, you are taking responsibility, on behalf of the HSS and UoE, that the research proposed truly poses no ethical risks.

LEVEL 2 / 3 ETHICAL REVIEW

- Complete only if indicated in the conclusion of your level 1 form.
- Applications will be monitored and audited to ensure that the School Ethics Policy and Procedures are being complied with and applicants contacted in cases where there may be particular concerns or queries.
- Research must not proceed before ethical approval has been granted. For this reason it is particularly important that applications are submitted well in advance of any required date of approval.

If the answer to any of the questions below is 'yes', please elaborate and give details of how this issue will be addressed to ensure that ethical standards are maintained. The response boxes will expand as you complete them. Forms that do not contain sufficient detail will be returned incurring delay.

RISKS TO, AND SAFETY OF, RESEARCHERS NAMED IN THIS APPLICATION	
ER ¹	Do any of those conducting the research named above need appropriate training to enable them to conduct the proposed research safely and in accordance with the ethical principles set out by the College?
<p>YES</p> <p>The primary researcher will require additional training, support and advice in conducting the proposed statistical analyses in order to ensure accurate and appropriate data management.</p>	
ER ²	Are any of the researchers likely to be sent or go to any areas where their safety may be compromised, or they may need support to deal with difficult issues?
<p>NO</p>	
ER ³	Could researchers have any conflicts of interest?

NO
RISKS TO, AND SAFETY OF, PARTICIPANTS
<p>^{ER4} Are any of your participants children or protected adults (protected adults are those in receipt of registered care, health, community care or welfare services – please refer to http://www.disclosurescotland.co.uk/guidance/infoforindiv/chap2_regulatedwork/2_3_step_2_define.html ?</p> <p>Anyone who will have contact with children or protected adults requires approval from Disclosure Scotland at http://www.disclosurescotland.co.uk/</p> <p>Do any of the researchers taking part in this study require Disclosure Scotland approval?</p> <p>Ethical approval will be subject to documentation confirming Disclosure Scotland approval with this form.</p> <p>NO</p>
<p>^{ER5} Could the research induce any psychological stress or discomfort?</p>

YES

Firstly, there is a risk that older adult participants will find completing questionnaire pack strenuous. In order to ensure that the questionnaires are as easy as possible to complete, volunteers from the Scottish Borders Senior Networking Forum will be invited to complete the questionnaire and provide feedback. Feedback will be sought on the completion process including clarity, readability, wording, length and duration. In the event that feedback indicates the need to make some changes to the questionnaire pack the amended pack will be resubmitted to R&D and for University of Edinburgh Ethics Committee for review and approval.

Secondly, the questionnaire asks participants about their current and past mental health in addition to their knowledge about mental health difficulties more generally. It is possible that some participants, particularly those who may be emotionally avoidant, may find being asked about mental health confrontational and therefore upsetting. In order to reduce the likelihood of participant distress, information about participation in the study will clearly state that participants will be asked about their knowledge of mental health and about their own well-being. The participant information sheet will also outline the possible risks and disadvantages of taking part by stating that some questions may be upsetting for participants. The right to withdraw from the study at any time (prior to returning the questionnaire) will also be clearly stated. Contact details for the primary researcher will be provided and participants will be advised to please get in contact if they have any concerns or questions prior to or following participation. Contact details for representatives from both R&D within the NHS board and the University of Edinburgh Research Governance Committee will also be provided (see participant information sheet for details). Finally, the contact details for Samaritans (24 hour emotional support) will also be provided on the participant information sheet.

^{ER6} Does the research involve any physically invasive or potentially physically harmful procedures?

NO

^{ER7} Could this research adversely affect participants in any other way?

NO

RESEARCH DESIGN

^{ER8} Does the research involves living human subjects specifically recruited for this research project

If 'no', go to section 6

YES
ER9 How many participants will be involved in the study?
A sample of approximately 265 participants will be sought.
ER10 What criteria will be used in deciding on inclusion/exclusion of participants?
<p>In order to maximize sample size and increase the likelihood of achieving a representative sample from the community minimal inclusion and exclusion criteria will be required.</p> <p>Inclusion criteria: 1) Older adults aged ≥ 65, 2) living in the Scottish Borders, 3) able to speak and understand</p> <p>proficient English, 4) without cognitive impairment and 5) able to provide written consent will be invited to participate in the study. The decision to require a minimum age of 65 years reflects a cut-off commonly accepted in the research literature on older adults.</p>
ER11 How will the sample be recruited? (E.g. posters, letters, a direct approach- specify by whom.)

Questionnaire packs (please see attached) will contain a letter of invitation, participant information sheet, an informed-consent form, three standardised measures and a demographic questionnaire. Pre-paid, addressed envelopes will also be included. The questionnaire packs will be made available online and also distributed in 10-20 community centres across the Borders. Permission to do so has been granted by local organisation management (LIVE Borders) who oversee a range of public venues in the region (e.g. libraries, leisure centers and village halls). Furthermore, requests to distribute the packs will also be sought from organisations for older adults based in the Borders (e.g. Age Scotland). An online version of the survey will be made available and community organisations (e.g. LIVE Borders, Heart of Hawick) will be approached and asked to share the link to the survey on their FaceBook page or distribute the link in their newsletter (Scottish Borders Senior Networking Forum).

Participants will be made aware that their answers will be kept anonymous and that their initialled and signed consent forms will be filed separately from their completed questionnaire. Consent forms on the online version will comprise of the same format as the hardcopies. However, instead of initialling the statements of consent, participants will be required to tick the corresponding box to each statement in order to proceed with the survey. No signature will be required for the online survey but participants will be asked to tick a signature box instead. It is expected that questionnaire packs will take approximately 20-30 minutes to complete. Finally, participants who would like to receive a summary of the research findings will be asked to phone the primary researcher and provide their contact details, thereby ensuring that participant responses on the questionnaire cannot be linked to their identity.

ER12 Will the study involve groups or individuals who are in custody or care, such as students at school, self-help groups, residents of nursing home?

NO

ER13 Will there be a control group?

NO

ER14 What information will be provided to participants prior to their consent? (e.g. information leaflet, briefing session)

<p>Participants will be provided with a letter of invitation, an information sheet and a consent form prior to agreeing to take part in the study. Should any participants have further questions prior to participating they may contact the primary researcher on the email and work telephone number provided (see participant information sheet for more details).</p>
<p>ER15 Participants have a right to withdraw from the study at any time. Please tick to confirm that participants will be advised of their rights, including the right to continue receiving services if they withdraw from the study.</p>
<p>ER16 Will it be necessary for participants to take part in the study without their knowledge and consent? (e.g. covert observation of people in non-public places)</p>
<p>NO</p>
<p>ER17 Where consent is obtained, what steps will be taken to ensure that a written record is maintained?</p>
<p>Upon receiving the completed questionnaire the primary researcher will check to ensure that a consent form has been completed before inputting the data into Excel. In order to maintain anonymity the initialled and signed consent forms will be filed separately from the completed questionnaire. Consent forms on the online version will comprise of the same format as the hardcopies. However, instead of initialling the statements of consent, participants will be required to tick the corresponding box to each statement in order to proceed with the survey. No signature will be required for the online survey but participants will be asked to tick a signature box instead.</p>
<p>ER18 In the case of participants whose first language is not English, what arrangements are being made to ensure informed consent?</p>
<p>No arrangements have been made and the inclusion criteria stipulate that all participants must have proficient English.</p>
<p>ER19 Will participants receive any financial or other benefit from their participation?</p>
<p>NO</p>
<p>ER20 Are any of the participants likely to be particularly vulnerable, such as elderly or disabled people, adults with incapacity, your own students, members of ethnic minorities, or in a professional or client relationship with the researcher?</p>

YES
<p>All participants must be aged 65 and over. The participant information sheet stipulates that participants must not have a dementia or cognitive impairment. In order to protect elderly participants' who may not have the capacity to consent to participation any questionnaires where participants have indicated that they have a diagnosis of Alzheimer's disease or dementia (as asked in the demographic questionnaire) will not be included in the study in order to reduce the likelihood that participants 'participated' without giving informed consent. Furthermore, any questionnaires which raise concerns about the participants' level of ability/understanding (e.g. incomplete items, illegible writing /unusually placed responses will be discussed with the clinical thesis supervisor (consultant clinical psychologist in older adult services)and the decision about whether to include or discard the questionnaire will be agreed jointly.</p>
<p>ER21 Will any of the participants be under 16 years of age?</p>
NO
<p>ER22 Will any of the participants be interviewed in situations which will compromise their ability to give informed consent, such as in prison, residential care, or the care of the local authority?</p>
NO
DATA PROTECTION
<p>ER23 Will any part of the research involve audio, film or video recording of individuals?</p>
NO
<p>ER24 Will the research require collection of personal information from any persons without their direct consent?</p>
NO
<p>ER25 How will the confidentiality of data, including the identity of participants (whether specifically recruited for the research or not) be ensured?</p>

<p>Electronically available data (e.g. excel spreadsheets) will not identify the participant and signed consent forms/contact details will be filed separately from questionnaire data. Raw data gathered will be password protected and stored in encrypted USBs and password protected computers (Data Protection Act, 1998). Anonymised data generated by the study will be saved on an NHS computer which is encrypted and password protected. However, the collated and anonymised dataset may also be analysed using personal or university computers.</p>
<p>ER26 Who will be entitled to have access to the raw data?</p>
<p>The primary researcher and the clinical thesis supervisor will have access to the raw data. The primary researcher will input the raw data into an Excel file which will then be accessible to others within the research team (supervisors, statistician at the University).</p>
<p>ER27 How and where will the data be stored, in what format, and for how long?</p>
<p>Data will be stored on NHS Borders premises (Adult Mental Health Administration, Huntlyburn House, Melrose, TD6 9BD) in a locked filing cabinet (e.g. completed hardcopies of the questionnaire) for up to five years as required by NHS R&D guidelines. This can be accessed by the clinical research supervisor and by the Head of Psychology in NHS Borders.</p> <p>Personal data (e.g. contact details for participants who requested and received a copy of the study's findings) will be destroyed within 3 months of the study ending. Anonymised raw scores on the questionnaires will be stored in a .csv file or Excel spreadsheet. A codebook would also be produced for the variables. This will be accessible by the clinical thesis supervisor (who is also the Head of Psychology within NHS Borders).</p> <p>The anonymised electronic dataset generated by the study will be stored on a password protected NHS computer, accessible by the clinical thesis supervisor, for at least five years. The anonymised dataset will also be offered for storage at The University of Edinburgh's DataShare repository for a minimum of ten years to ensure preservation and continued access of data. The anonymous data may be accessed by ethically approved studies in the future (as consented by the participants). Please see ER29 below for further details.</p>
<p>ER28 What steps have been taken to ensure that only entitled persons will have access to the data?</p>
<p>Data gathered will be password protected and stored in encrypted USBs and password protected computers (Data Protection Act, 1998)</p>
<p>ER29 How will the data be disposed of?</p>

There is no limit for the amount of time DataShare will curate data for. The anonymised data will be curated for a minimum of 10 years, followed by a review every 5 years. This is in line with standard curation periods taken by the Clinical Psychology Department at The University of Edinburgh, as recommended by the Medical Research Council.

ER30 How will the results of the research be used?

The research findings will be submitted to the University of Edinburgh as a Doctoral Thesis in part fulfilment of the Doctorate in Clinical Psychology. The findings will also be disseminated to any participants who indicated an interest in obtaining a lay-summary of the findings, presented to NHS Borders staff and to Scottish Borders Senior Networking Forum. The research article will be submitted for peer-reviewed publication in either 'The Journal of ageing and mental health' or 'The International Journal of Aging and Society.'

This research will provide an estimate of the level of mental health literacy in the community and how that

compares to other populations in the research literature. This will help to ascertain whether community initiatives to improve mental health literacy are warranted. Secondly, research concerned with, and involving rural-dwelling, older adults is of particular importance as older adults and rural communities are often marginalized (Fuller et al., 2000). Third, Compared to other Scottish health boards, NHS Borders has one of the lowest referral rates to older adult mental health services (NHS Scotland Information Services Division, 2017). This is despite the Borders having a higher older adult population (30.5% aged ≥ 60) than the rest of the U.K (24% aged ≥ 60) (National Records of Scotland, 2017). Given the significantly low rates of referrals to older adult mental health in the region, it is hoped that this research will help to identify relevant intrinsic/extrinsic barriers to accessing mental health support in older adults. This information will highlight areas for development within mental health services in terms of how we might better engage older adults. Findings may also have a bearing on recommendations for planning and policy development within health services for older adults.

ER31 What feedback of findings will be given to participants?

Participants who would like to receive a summary of the research findings will be asked to phone the primary

researcher and provide their contact details, thereby ensuring that participant responses on the questionnaire cannot be linked to their identity. The research findings will be disseminated to any participants who indicated an interest in obtaining a lay-summary of the findings.

ER32 Is any information likely to be passed on to external companies or organisations in the course of the research?

NO

ER33 Will the project involve the transfer of personal data to countries outside the European Economic Area?

NO

ER34 An application at this level is likely to require additional documentation, for example consent forms or participant information sheets. Please return to the Documentation Checklist on page 2 to list your supporting documentation.

ER35 ISSUES ARISING FROM THE PROPOSAL

I can confirm that the above application has been reviewed by two independent reviewers. It is their opinion that:

a) The ethical issues listed below arise or require clarification:

1. Participant Information Sheet: Substitute another term, more suited to layperson, for 'cognitive difficulties' in the Participant Information Sheet.
2. 'How will my information be stored' - should explain that will be kept securely on NHS Borders premises, with consent form stored separately from questionnaires.
3. Ethics Application Form: ER5: Confirm that any amendments to questionnaires (following feedback from SBSNF) will be submitted for ethical approval.
4. "Data will also be stored at Edinburgh University". This is unclear – what data and how?
5. There is an inconsistency between methodology and inclusion/exclusion. The inclusion say participants will reside in Scottish Borders, but method states that recruitment may be online – therefore participants may not be from Borders. This needs to be revised to be consistent in one direction or another.
6. Apostrophe should after the 's' at the end of older adults/participants/ etc.

The applicant should respond to these comments in section 8 below.

Signature: 


Position: Lecturer in Clinical Psychology, Ethics Tutor

Date: 16/08/17

ER36 **APPLICANT'S RESPONSE (If required)**

Thank you for your review. I have now made the required changes. Please see an outline of these below.

1. Participant Information Sheet: Instead of 'cognitive difficulties' in isolation I have included **'cognitive difficulties, e.g. problems with memory, concentration and not thinking as clearly'**
2. 'How will my information be stored' – I have added **'All completed questionnaires will be stored separately from your signed consent forms and stored securely on NHS Border premises.'**
3. Ethics Application Form: ER5: I have now included **'In the event that feedback indicates the need to make some changes to the questionnaire pack the amended pack will be resubmitted to R&D and for University of Edinburgh Ethics Committee for review and approval.'**
4. "Data will also be stored at Edinburgh University". I assume this refers to the methods summary (SA2). There are further details about this in ER27 but I have now also included them in the summary section: **'The anonymised electronic dataset generated by the study will be stored on a password protected NHS computer, accessible by the clinical thesis supervisor, for at least five years. The anonymised dataset will also be offered for storage at The University of Edinburgh's DataShare repository for a minimum of ten years to ensure preservation and continued access of data. The anonymous data may be accessed by ethically approved studies in the future (as consented by the participants). Please see ER29 below for further details'**
5. Participants must reside in the Scottish Borders as stipulated in the inclusion criteria. An online version of the questionnaire will be made available and will also stipulate the same inclusion criteria. However, in the summary section I highlight the potential (dis)advantages of online recruitment through local websites. One potential disadvantage of 'online' recruitment is that it may be more difficult to regulate/ensure that respondents do actually reside in the Scottish Borders compared to when respondents obtain a questionnaire pack from a local Scottish Borders venue. I can see that this has caused some confusion and have edited this section so that it might be clearer: **'While online recruitment has some advantages such as the potential to reduce costs (e.g. paper/postage) and increase sample size and diversity it also has some potential disadvantages. Although the requirement to live within the Scottish Borders in order to participate will be made clear to all potential participants it may be more difficult to regulate this when participants complete an online survey compared to a questionnaire pack from a local community centre.'** In an attempt to better regulate this, an item asking 'do you live in the Scottish Borders?' has been added to the demographic questionnaire (see item 4). As R&D approval has only been granted for the Scottish Borders any participants who indicate that they do not live in the Scottish Borders will not be included in the study.
6. Thank you for your comment, I have proof-read this document and amended grammatical inaccuracies.



Date: 17/08/17

ture:

ER37

CONCLUSION TO ETHICAL REVIEW (if required)

The applicant's response to our request for further clarification or amendments has now satisfied the requirements for ethical practice and the application has therefore been approved.

Signature:**Position: Lecturer in Clinical Psychology, Ethics Tutor**

Date: 22/08/17

ER38

AMENDMENT/S: REQUEST FOR APPROVAL

Subsequent to receipt of ethical approval above, I, the applicant, would like to request the following amendment/s to my original proposal.

These changes reflect suggestions and feedback made by 7 older adults who volunteered their time to read through, complete and answer questions the questionnaire pack.

1. Cover/'poster' page added to front of questionnaire pack in an attempt to make it more eye-catching.
2. Consent form moved to inside the first page of the actual questionnaire so that participants can retain the information sheet more easily.
3. Page numbers added to questionnaire
4. Demographic questions:
Q5. Now includes 'college' as an option in addition to university
Q12. A 'None' option has been added

5. p.5 CORE-10: Participants feedback that the numbering was confusing. It has been adapted to fit with the previous page's instructions. Initially items 2 and 3 had numbers descending (reverse score) while the rest of the items had numbers ascending. All items will now reflect the above. The primary researcher will reverse score when inputting the data. Items 2 & 3 which are reverse scored are marked with a discreet colon.

6. Two volunteers did not complete sections 1-15 of the mental health literacy questionnaire because they felt that the terms were too difficult and they did not know the answers. Another said it felt like a medical exam. One person asked whether she could look up the terms on google. Therefore I have included:

P6. 'The purpose of these questions is to find out what you know and think about mental health. Most people do not get all of the questions correct or know what each term means. Please do not look words up. Please do your best to answer all of the questions even if you are unsure.'

In the hopes that it puts participants at ease and encourages them to answer even if they are unsure.

7. Items 14 & 15 'your' has been swapped to 'someone' in order to keep the questions consistent with previous questions about mental health knowledge and to help ensure that participants don't become confused and think that only 'mental health patient's should be completing the questionnaire as one volunteer thought.

e.g. 'If you are at immediate risk of harm to yourself or others' to 'If someone is at immediate risk of harm to themselves or others' **and** 'if your problem is not life-threatening and they want to assist others to better support you' to 'if someone's problem is not life-threatening and the mental health professional wants to assist others to better support that person.'

8. Items 24, 32-35 were mistakenly not included previously and have now been added.
9. Items 16 -28 and 29 – 35 have been reformatted in the interest of keeping response options/instructions as consistent as possible (initially a tick box now asked to circle a response)

immediate risk of harm to themselves or others' and 'if your problem is not life-threatening and they want to assist others to better support you' to 'if someone's problem is not life-threatening and the mental health professional wants to assist others to better support that person.'

8.Items 24, 32-35 were mistakenly not included previously and have now been added.

9.Items 16 -28 and 29 – 35 have been reformatted in the interest of keeping response options/instructions as consistent as possible (initially a tick box now asked to circle a response)

Signature:



Date: 22/09/17

ER39

CONCLUSION TO ETHICAL REVIEW OF AMENDMENT

I can confirm that the above amendment has been reviewed by two independent reviewers. It is their opinion that:

- a. Ethical issues have been satisfactorily addressed and no further response from the applicant is necessary,

Signature:



Position: Lecturer in Clinical Psychology, Ethics Tutor

Date: 27/09/17

ER40

AMENDMENT/S: REQUEST FOR APPROVAL

Subsequent to receipt of ethical approval above, I, the applicant, would like to request the following amendment/s to my original proposal. Please see bold type for suggested changes to the questionnaire pack:

Cover Letter (P.2)

1. As part of my studies I am required to complete a research project, **the findings of which may be presented and/or published.**
2. 'return using the pre-paid envelope provided **as soon as possible** and before (date of deadline)'

Participant Information Sheet

1. (P. 3)In section DO I HAVE TO TAKE PART: '**once you have sent the questionnaire it will not be possible to withdraw you from the study as we will not be able to identify which one is yours**'
2. (P.3) 'HOW WILL MY INFORMATION BE STORED' changed to 'HOW WILL MY INFORMATION BE STORED **AND USED.**' and '**Data from this study will be used in my doctoral thesis and for future publications and presentations. You will not be identifiable in any published information.**' has been added.
3. In the section 'person's to contact'(p.3) the word 'concerns' has been deleted so that it now reads: '**If you have any further questions about the study please contact the lead researcher**'
4. In the section 'person's to contact'(p.3) '**If you wish to make a complaint about the study please contact:**' has been added to the Edinburgh Uni research governance contact details.
5. (P.3) An instruction to '**Please retain this section for your own information**' has been added to the bottom of the page.

Participant Consent Form

1. Second consent box 'I understand that my participation is voluntary and that I am free to discontinue my participation at any time, **prior to sending the questionnaire**, without experiencing any disadvantage.
2. Third consent box, last word 'records' has been changed to '**anonymised data**' (as volunteers advised that the wording was confusing and led them to think of medical records)
3. Fourth consent box changed to include 'I agree to my anonymised data being used **towards publications and** in future ethically approved studies.' (In order to be more explicit)
4. Signature line deleted-participants only asked to initial each item as before and to initial and date the bottom of the consent page. (This has been changed in order to ensure participant anonymity is maintained, following advice from volunteers that asking for their signature did not feel 'anonymous'. Given that I am asking participants about their mental health and attitudes towards others with mental health problems I feel that greater anonymity is important for the participants. Furthermore, omitting the signature means that the paper version of the questionnaire will be more similar to the online version of the
5. questionnaire.

This is important in order to maintain consistency across the two versions).

Demographic Questionnaire (P.3): Item 16 '**Tick all that apply**' added

Mental health literacy scale (P. 6): Instructions changed to: 'Most people do not ~~get all~~ of the questions correct or know what each term means'

Proposed changes to methodology.

Recruitment Plan: Questionnaire pack distributed from Nov-Jan 2018 with a Jan 2018 deadline. Second recruitment wave from Feb with April/May (2018) deadline as needed.

Signature:



Date: 19/10/17

ER39 CONCLUSION TO ETHICAL REVIEW OF AMENDMENT

I can confirm that the above amendment has been reviewed by an independent reviewer. It is the opinion that:

- a. Ethical issues have been satisfactorily addressed and no further response from the applicant is necessary,

Signature:



Position: Lecturer in Clinical Psychology, Ethics Tutor

Date: 24/10/17

ER41

AMENDMENT/S: REQUEST FOR APPROVAL

Subsequent to receipt of ethical approval above, I, the applicant, would like to request the following amendment/s to my original proposal.

NHS Borders R&D have not approved the proposal to change the consent signature to initials. **The signature line on the consent form has been reinstated. Furthermore, a signature line for the primary researcher has been added** in line with NHS Borders research policy.

The demographic questionnaire has an additional question:

“Q.12. Have you ever used any mental health services (e.g. NHS)? ☐ Yes ☐

Signature:



Date: 04/11/17

ER39 CONCLUSION TO ETHICAL REVIEW OF AMENDMENT

I can confirm that the above amendment has been reviewed by an independent reviewer. It is the opinion that:

- b. Ethical issues have been satisfactorily addressed and no further response from the applicant is necessary,

CLINICAL PSYCHOLOGY Research Ethics

Today, 11:55 CREMERS Gwendolyn

Dear Gwendolyn,

This is a minor change. Happy to agree change.

Best wishes,

Angus

Angus MacBeth

Lecturer in Clinical Psychology/Ethics Tutor

Signature:

Date: 13/11/17

ER41

AMENDMENT/S: REQUEST FOR APPROVAL

Subsequent to receipt of ethical approval above, I, the applicant, would like to request the following amendment/s to my original proposal (from 04_11_17)

Recruitment

The original recruitment strategies described in this proposal have been relatively unsuccessful. For example, 250 questionnaire packs distributed to a wide range of community centres, volunteers distributing questionnaires within their own organizations/groups and the online questionnaire made available through local newsletters and on community websites have only yielded 38 responses in total.

I would like to request permission to include three new recruitment strategies in addition to the aforementioned strategies. I propose approaching groups and organizations (retirement homes, churches, social clubs etc) and asking whether I can attend their event/group and give a short presentation of my research project, answer any questions and invite participation in person. I also propose having a stall/table at community events or in community locations (with organizer/venue manager permission e.g. mental health awareness week, borders organic gardeners potato day, shopping centre). If approached I will offer information about my project, answer any questions and invite participation. I will have flyers with the online survey address and hardcopies of the questionnaire pack available. I will also offer to email any interested potential participants a link to the survey if that is more convenient for them.

I will not ask participants to complete the questionnaire in my presence as this may lead participants to feel uncomfortable and unintentionally coerced. I will advise potential participants that they can take a look through the questionnaire in their own time and decide whether or not to take part. In this way their decision about whether to participate remains anonymous and they are free to determine whether to participate after better informing themselves by reading through the information pack.

I would also like to request permission to put up posters in community locations with the survey website available on tear off slips (see attached) and to seek permission to contact the local paper and ask if they will include a short blurb including the survey link in their newspaper.

Changes to information sheet

Finally, I would like to make 2 changes to my information sheet. Several potential participants have contacted me to say that they do not think they will be of any use because they don't know much about mental health. In addition to this, eyeballing the data it does indeed appear that only people with good mental health knowledge have participated. In order to encourage those who feel they do not have any mental health knowledge to take part and in order to try and get a more heterogeneous range of responses I would like to add 'You do not have to have any experience or knowledge of

mental health to participate' to the cover page.

Several participants have contacted me wondering if they can take part because they have noticed that their memory is not as good as it used to be. On p.3 of the information sheet I would like to change the wording of the exclusion criteria from 'and you must not have a dementia or suffer from cognitive difficulties: e.g. problems with memory

mental health to participate' to the cover page.

Several participants have contacted me wondering if they can take part because they have noticed that their memory is not as good as it used to be. On p.3 of the information sheet I would like to change the wording of the exclusion criteria from 'and you must not have a dementia or suffer from cognitive difficulties: e.g. problems with memory, concentration and not thinking so clearly' to 'and you must not have a dementia or suffer from a diagnosed cognitive difficulty: e.g. significant problems with memory, concentration and not thinking clearly'.

Once approved these changes will be amended on the online survey.

Signature:



Date: 07/02/18

ER39 CONCLUSION TO ETHICAL REVIEW OF AMENDMENT

I can confirm that the above amendment has been reviewed by an independent reviewer. It is the opinion that:

MACBETH Angus Wed 21/02/2018, 12:35 CREMERS Gwendolyn

Hi Gwendolyn,

I've just signed off your Uni form via Ethics inbox.

Best,
Angus

Dr Angus MacBeth, CPsychol, AFBPsS

Signature:

Position: Lecturer in Clinical Psychology, Ethics Tutor

Date: 21/02/18

Acronyms / Terms Used

NHS: National Health Service

SHSS: School of Health in Social Science

IRAS: Integrated Research Applications System

Section: The SHSS is divided into Sections or subject areas, these are; Nursing Studies, Clinical Psychology, Counselling and Psychotherapy and Interdisciplinary Social Sciences in Health

Appendix F: NHS Borders Research and Design Approval

NHS Borders

Research Administration
Clinical Governance & Quality

Clinical Office
Borders General Hospital
Melrose
Roxburghshire TD6 9BS

Telephone 01896 826719
Fax 01896 826040
www.nhsborders.org.uk



Miss Gwendoline Cremers
NHS Borders
Psychological Services
Mental Health Administration
Huntlyburn House
Melrose
TD6 9BD

Date 23 February 2018

Our Ref 17/BORD/13
Enquiries to Joy Dawson
Extension 01896 826717
Email research.governance@borders.scot.nhs.uk

Dear Miss Cremers

17/BORD/13: An Exploration of Mental Health Literacy in Older Adults: Version 1- SA03

Thank you for sending details of the amendment of your study to NHS Borders. I am pleased to inform you the amendment has been granted management approval the Research Governance Committee for commencement within NHS Borders.

Please advise the R&D Office immediately of any changes to the project such as amendments to the protocol, recruitment, funding, personnel or resource input required of NHS Borders.

Please inform this office when recruitment has closed and when the study has been completed. Please quote the reference number stated above in all correspondence.

May I take this opportunity to wish you every success with your project. Please do not hesitate to contact the R&D Office should you require any further assistance.

Yours sincerely

A handwritten signature in black ink, appearing to read "Ros Gray".

Mrs Ros Gray
Head of Quality and Clinical Governance





Older Adults Knowledge about Mental Health

**Are you aged 65+ and live in the Scottish Borders?
Do you have 20-30 minutes to spare?**

**If so, I am interested in finding out what you *think* and
know about mental health.**

**You do not have to have any experience or knowledge
of mental health to participate.**

Your participation will be anonymous

Please ***look inside*** and see if you would like to take part.
You can take part by reading the information and
answering questions about yourself and about your
knowledge of mental health.

Your participation would be greatly valued



Dear Sir/Madam,

My name is Gwendolyn Cremers and I am a Trainee Clinical Psychologist in NHS Borders. As part of my studies I am required to complete a research project, the findings of which may be presented and/or published. I am interested in finding out about older adults' knowledge about mental health. If you are aged 65 and over then your participation would be greatly valued.

If you are willing and able to participate in my study please read the information sheet which outlines the research study. It is important that you read this so that you understand the purpose of the research, what is involved in participating and who will benefit from the study findings.

If you are willing to participate please (1) read the information sheet (2) sign the consent form (3) complete the questionnaire survey enclosed and (4) return using the pre-paid envelope provided as soon as possible and before

Sincerely,

Gwendolyn Cremers

Trainee Clinical Psychologist

Please turn over



Participant Information Sheet



Please read this information sheet carefully before deciding whether or not to participate in the study

STUDY TITLE: An Exploration into the relationships between Mental Health Literacy, Coping Style and Psychological Well-being in Older Adults in a Rural Scottish Area.

PURPOSES OF THE STUDY:

This study aims to explore the mental health knowledge (also called 'mental health literacy') of older adults in the Scottish Borders. It also aims to explore whether mental health literacy is related to older adults' well-being, their coping styles and their use of mental health services and supports.

WHO CAN TAKE PART IN THE STUDY?

To take part you must be:

- 1) Aged 65 and over
- 2) Live in the Scottish Borders
- 3) Able to speak and understand English
- 4) and you must **not** have a dementia or suffer from a diagnosed cognitive difficulty: e.g. significant problems with memory, concentration and not thinking clearly.

DO I HAVE TO TAKE PART?

You do not have to take part in the study unless you want to. Your decision about whether or not to participate in the study will not disadvantage you in any way. You can change your mind even after completing the questionnaire by not sending it. However, once you have sent the questionnaire it will not be possible to withdraw from the study as we will not be able to identify which one is yours.

WHAT WOULD BE EXPECTED OF ME?

If you decide to participate in this study you will be asked to fill out the attached questionnaire (which will take about 20 minutes). You will be asked about your mental health knowledge, well-being, coping styles and other characteristics about yourself (such as your age, gender, income).

HOW WILL MY INFORMATION BE STORED AND USED?

Your answers in the questionnaire will be kept confidential and anonymous. Individual responses will not be reported in this study. All completed questionnaires will be stored separately from your signed consent forms and stored securely on NHS Border premises. Data from this study will be used in my doctoral thesis and for future publications and presentations. You will not be identifiable in any published information.

BENEFITS OF THE STUDY:

There will not be any direct benefits to you for taking part in the study. However, you will be given the option of receiving a summary of the study's findings. There is a lack of research on older adults and the information you provide will be used to inform the research literature. It is hoped that this study's findings can offer some new ideas about how to engage and support older adults.

POSSIBLE DISADVANTAGES AND RISKS OF TAKING PART

If you decide to take part you will be asked about your own mental health and well-being. Some of the questions may be upsetting for some people, although the risk is thought to be low. I do not anticipate any other risks to participants. However, sometimes our thoughts and feelings can overwhelm us. If you feel concerned that you are experiencing any distress please contact your general practitioner.

You could also contact the Samaritans (available 24/7) who offer confidential, emotional support by freephone telephone (116 123) or email:

jo@samaritans.org in relation to anything that is bothering you.

PERSONS TO CONTACT

If you have any further questions about the study please contact the lead researcher, Gwendolyn Cremers (Trainee Clinical Psychologist) on (07775227129) or Email: s1373579@sms.ed.ac.uk

If you would like to discuss this study with someone independent of the study team please contact: Mrs Joy Dawson on (01896 826 717) or email Research.governance@borders.scot.nhs.uk

If you wish to make a complaint about the study please contact: The University of Edinburgh's Research Governance team via email at: resgov@accord.scot

Thank you for taking the time to decide whether or not to participate in this study. Please keep this section for your own information

QUESTIONNAIRE SURVEY

An Exploration into the relationships between Mental Health Literacy, Coping Styles and Psychological Well-being in Older Adults in a Rural Scottish Area.



Participant Consent Form



STUDY TITLE: An Exploration into the relationships between Mental Health Literacy, Coping Style and Psychological Well-being in Older Adults in a Rural Scottish Area.

LEAD RESEARCHER: Gwendolyn Cremers, Trainee Clinical Psychologist, NHS Borders

Please initial the following boxes:

- ☐ I confirm that I have read and understood the information sheet: version 3, dated 04_11_2017 (see bottom of page).
- ☐ I understand that my participation is voluntary and that I am free to discontinue my participation at any time, prior to sending the questionnaire, without experiencing any disadvantage.
- ☐ I understand that relevant sections of data collected during the study may be looked at by individuals from the regulatory authorities and from the Sponsor (the University of Edinburgh) or from the/other NHS Board(s) where it is relevant to my taking part in this research. I give permission for those individuals to have access to my anonymised data.
- ☐ I agree to my anonymised data being used towards publications and in future ethically approved studies.
- ☐ I agree to take part in this study.

Signature: _____ Date: _____

Researcher signature: _____ Date: _____

GWENDOLYN CREMERS

Demographic Information

1. What is your gender? ☐ Male ☐ Female ☐ Other ☐ Prefer not to say

2. What is your ethnicity? ☐ White ☐ Black ☐ Asian ☐ Mixed race ☐ Hispanic
☐ Other

3. What is your age? _____

4. Do you live in the Scottish Borders? Yes ☐ No ☐

5. Do you live in a: Town ☐ Village ☐ the Countryside (please circle)

6. What is your highest level of education achieved?

☐ Primary school ☐ Secondary school ☐ College/University

7. What is your annual income range? ☐ <10,000 ☐ 10,000 – 20,000 ☐ >20,000

8. Are you: ☐ Employed ☐ Retired ☐ Other, please specify _____

9. Marital Status: ☐ Married ☐ Cohabiting ☐ Single ☐ Prefer not to say

10. Are you currently taking any medication? ☐ Yes ☐ No ☐ Prefer not to say

10b. If yes, is the medication for: ☐ Physical health problem ☐ Mental health problem
☐ Both ☐ Prefer not to say ☐ Don't know

11. Have you ever been referred to mental health services or supports?

☐ Yes ☐ No ☐ Don't know ☐ Prefer not to say

12. Have you ever used any mental health services (e.g. NHS)? ☐ Yes ☐ No

13. Do you currently have any health problems? ☐ Physical health problem
☐ Mental health problem
☐ Prefer not to say ☐ Both ☐ None

14. Do you have difficulties with your memory? ☐ Yes ☐ No

15. Do you have a diagnosis of Alzheimer's disease or dementia? Yes ☐ No ☐

16. What services are you aware of in the Borders for older people with mental health problems (if any)? _____

17. Where would you seek support from if you had a mental health problem? (Tick all that apply)

☐ GP ☐ Friend ☐ Spouse/Partner ☐ No-one ☐ Other, please specify _____

